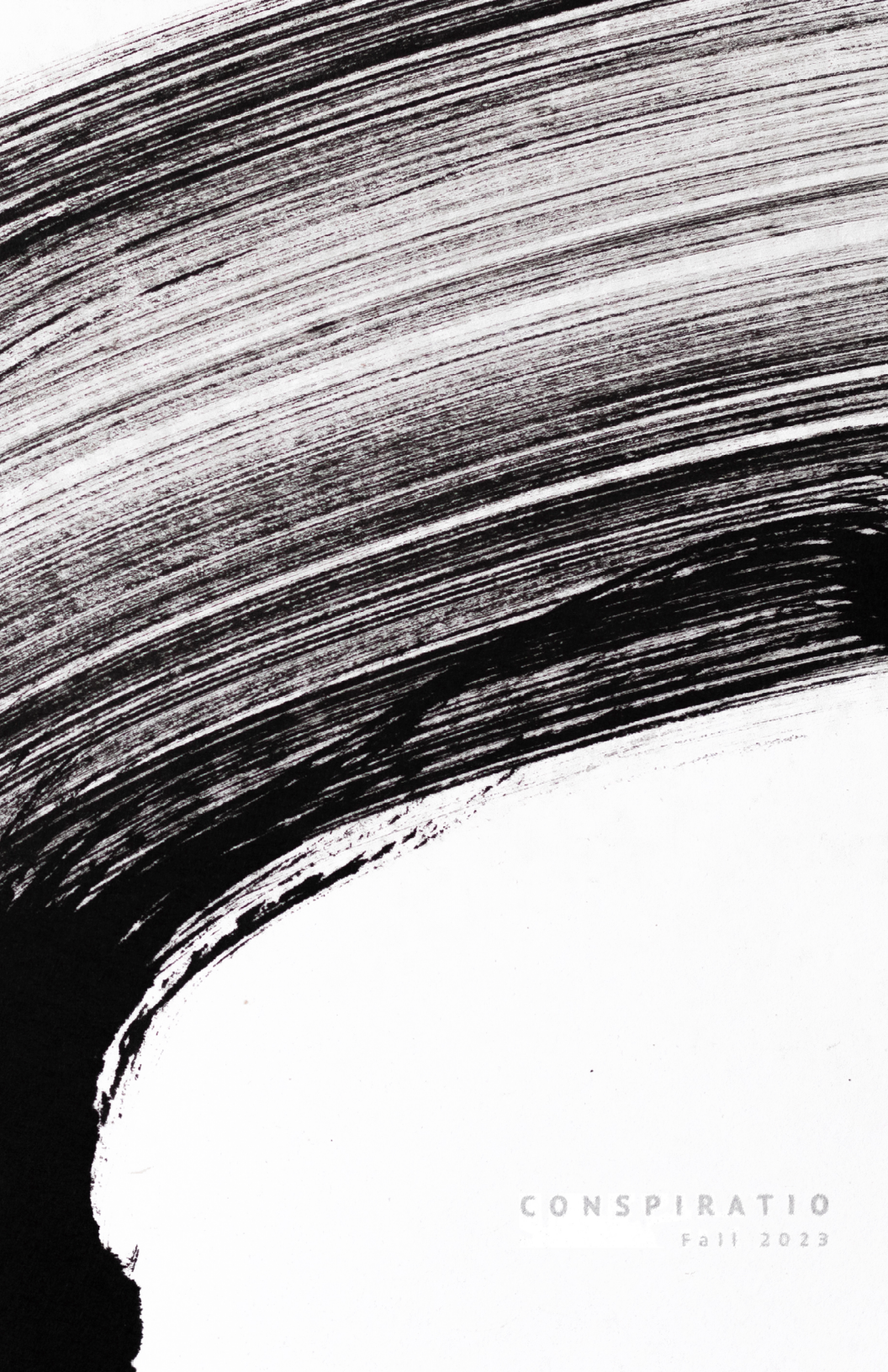




CONSPIRATIO

Fall 2023

Periodical for
Thinking After Ivan Illich



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the quest for truth cannot thrive
outside the nourishment
of mutual trust

Ivan Illich

About Conspiratio

Conspiratio is neither an academic journal nor a popular magazine. Each issue of Conspiratio comprises essays, thematic articles, book reviews, and occasional translations of texts on or by Illich. All that appears in its pages typifies what Illich called “research by people”, which names disciplined studies conducted by those attempting to beautify their own lives by being less dependent, in thought and deed, on the market and the state. For this reason, research by people is open to public debate and contestation. Though conducted through the medium of the written word, the periodical invokes the hoped-for intimacy of con-spiration. For an orientation, consult two essays by Illich: “Research by People” & “The Cultivation of Conspiracy”.

Conspiratio encourages contributions from everyone wanting to participate in thinking after Ivan Illich. All contributions are expected to reveal a degree of familiarity with Illich’s thought and to engage it in a thoughtful way. All are free to submit essays, book reviews, or translations for publication. Articles contributing to the theme of each issue should be made in response to the call for papers at www.thinkingafterivanillich.net

Conspiratio is published twice a year, in Fall and Spring. It will be available to be read online, downloaded as a pdf file, or received as a printed booklet (for a nominal printing and postage fee). To be apprised of current and forthcoming issues, please register at conspiratio@afterillich.net

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Editor's letter

This year marks the fiftieth anniversary of *Tools for Conviviality* in which Illich argued that technology could go through two phases, or in his word, watersheds.¹ The first watershed is crossed when an instrument becomes effective in realizing the purpose for which it is designed. Thomas Edison said he failed thousands of times before inventing a light bulb that worked. One of Illich's enduring contributions remains his specification of the perverse effects when instruments cross a second watershed. Beyond a certain scale, tools turn counter-productive, means become ends, the cure becomes worse than the disease.

The thematic articles inspired by *Tools* and included here begin with a two-piece set by Carl Mitcham. The first is a reprint of his hard-to-find article,² which is accompanied by a postscript he wrote for this issue. In the latter, Mitcham locates Illich's thought in reference to three streams in the study of the philosophy of technology that emerged after the 1950s. He names Alan Turing, Jacques Ellul, and Martin Heidegger as signposts for those wanting to trek through this scholarly literature. Crucially, he suggests that Illich's concerns are orthogonal to both Turing and Heidegger, while parallel to and

1 Illich used the word 'tool' in his book for a reason. "For thirty years now, I've tried to figure out how to use ordinary language in that slightly obscene way that makes people see something new without them knowing exactly why." David Cayley, *Ivan Illich in Conversation*, (Toronto: Anansi Press, 1992) p.109. For my purpose here, not much is lost if one uses tools, instruments, and technologies as synonyms.

2 Carl Mitcham, "Tools for Conviviality: argument, insight, and influence", in *Europe, America, and Technology: Philosophical Perspectives*, Paul T. Durbin (Ed.), (Kluwer Academic Publishers: Netherlands, 1991). pp.17-56.

yet distinct from those of Ellul.

In his earlier essay, which is a model of learned commentary on a text, Mitcham details the argument, insight, and influence of *Tools*. Sadly, his overall conclusion from 1991 remains just as valid in 2023 - *Tools* was then a “young argument” and remains so today. Moreover, it also continues to have “exceptionally limited influence” among scholars of the philosophy of technology, even though it had a significant influence on discussions about alternative.

This uneven effect is not surprising. The university, as Illich once noted, emerged from cleaving matters of the mind from matters of the heart, separating facts from “values.” Illich’s pamphlets and studies on the historicity of social axioms exemplify the co-ordination of thought and life. They presuppose the inextricable bond between seeking truth and living well. In that sense, it is perhaps practitioners of philosophical history that are closest to the spirit of Illich’s investigations. In the manner of Michel Foucault, such genealogies of the present are impelled by the kind of curiosity that puts into question who one is. It is therefore also unsurprising that Illich’s thirty-year-old claim about the historicity of the category of the tool should have been recently elaborated by two such practitioners of philosophical history—Giorgio Agamben and Nicholas Heron.

In 1988, Illich told David Cayley that in the fifteen years since he wrote *Tools*, he had been taking notes on the history of the instrument.³ When he wrote *Tools*, Illich had assumed the self-evidence of this category. Technology was still understood as means to achieve desired ends. Both smartphones and solar panels could be understood as devices made to achieve some purpose. Accordingly, in *Tools*, Illich only distinguishes dominant from convivial tools. No artifact falls outside the category of purpose-built devices. Perhaps it

3 See, David Cayley, *Illich in Conversation*, (Anansi Press: Toronto, 1992), pp.105-111.

was his confrontation with dominant tools and their counterproductive effects that prompted Illich to think about adequacy of the tool as a category. Whatever the reason, during the 1980s, Illich came to question whether everything usually classified as an instrument could be adequately understood as means for some end.

The existence of instruments presupposes the conceptual and hence palpable distinction between means and ends. A student who wants to learn physics and therefore enrolls in college believes she is using college to achieve her purpose. But what of a student who gets a college degree to increase the value of his human capital? The similarity between the two is only superficial. The one who sees himself as an instance of human capital manages himself as an economic entity. He behaves like a program designed to increase his self-worth. A programmed being responds to stimuli. He selects courses that maximize life-time earnings given economic trends. If the study of entomology results in higher net earnings than etymology, that is the credential he obtains. In this sense, programmed beings are not purposive beings who transfer their intentions to their tools.⁴

In his *Eudemian Ethics*, Aristotle says that there can be no community between artisan and tool any more than there can be a partnership between soul and body or master and slave.⁵ In each of these pairs, the second is an integral part of the first element. As incredible as this notion appears to us today, for Aristotle, the potter's wheel was an indivisible part of the potter and not something of a different kind or category. When and how did Western culture take as axiomatic that schools, hospitals, guns, spades, and chairs all belong to one

4 See the chapter titled "The Age of Systems", in David Cayley: *Rivers North of the Future*, (Anansi Press: Toronto, 2005).

5 Eudemian Ethics, 1241b, in *The Complete works of Aristotle*, (ed). Jonathan Barnes, (Princeton: Princeton University Press, 1984).

category—that of technology? And, are we living through the demise of the instrument, of technology as such?

It is precisely Illich's hypothesis on the rise and fall of the "age of the instrument" that is the subject of Jean Robert's last book titled *L'età dei sistemi nel pensiero dell'ultimo Illich* (*The Age of Systems in the thought of the late Illich*). The second article of this issue is the introduction from the recent English translation of the book, made possible by his lifelong partner Sylvia Marcos. In it, Robert outlines its chapters in broad strokes to explain the ongoing rupture between the instrument and the system. He shows them as non-comparable categories even if they are routinely confused by those living through the disappearance of tools. Robert's book has also been favorably reviewed in this issue by Diego Ferraris who consulted the original and definitive Italian edition.

Illich once said that the blind spot of the much-acclaimed multi-volume *History of Private Life* was that it was prepared on the assumption that the distinction between the private and public spheres was ahistorical. He argued instead that this more recent distinction had replaced an older one between the household and the commons. At the Illich gathering in Umbria last year, Giovanni Riganelli presented a riveting account of how Lake Trasimeno and its environs was transformed from a commons to property over the 11th and 12th centuries. Before then, the fish, fowl, and game found there were *res nullius* (nobody's things; no-things). With a historian's reticence, Riganelli limits himself to recording the steps by which what was once freely given was transformed into property and a taxable economic resource. His account also indicates some of the factors that continue to enforce the regime of property to this day. Only last year, the shoreline of Lake Trasimeno received a make-over. The state authorities saw fit to construct a tarmacked path around the lake to make it into an accessible tourist attraction. What was once open

for use by locals to repair and dry their fishing nets or to simply sit around and discuss the day's events has now become policed public property.

The capture of the commons by property occurs, suggestively, around the same period as the emergence of the instrument as a category. Both Giorgio Agamben and Nicholas Heron have recently elaborated Illich's account of the nexus, in the 12th century, between sacramental theology and the instrument.⁶ But there has been no equivalent philosophical history of the demise of the instrument. Incidentally, Illich knew very well what he did not speak of at length, which accounts for his allusive remarks on "the age of systems."⁷ For the emergence of systems from the ruin of instruments entails the demise of the enfleshed being.

This is what the next three articles attempt to point out, in different ways. Neto Leão argues that the world of systems is the consequence of a third watershed in addition to the two Illich already described. The exacerbation of symbolic counterproductivity becomes so complete, argues Leão, that it can no longer be perceived as such. The age of systems names the condition of people unable to understand themselves ex-

6 Consult for example, Giorgio Agamben, *Opus Dei: an archaeology of duty*, (Stanford: Stanford University Press, 2013); specially, *The Use of Bodies* (Stanford: Stanford University Press, 2016); and Nicholas Heron, *Liturgical Power: between economic and political theology* (New York: Fordham University Press, 2018).

7 Cayley notes that though Illich was at the center of much of the discussion on systems theory, he never wrote on the topic and made only "suggestive, but often sparse remarks" on it. David Cayley, *Ivan Illich: an intellectual journey*, (University Park: Pennsylvania State University, 2021), p.251. For proof of Illich's generosity in propagating ideas he could not have fully agreed with, consider what Francisco Varela has attested. "In January 1972, with a fresh copy of the manuscript, I was invited to Mexico by Ivan Illich, to his CIDOC center in Cuernavaca. I gave him the manuscript the day I arrived, and I will never forget his reaction the following morning: 'This is a classic text. You have managed to put autonomy at the center of science'...It is hard to express what finding receptivity in people of this quality meant to me at the time." See "The Early days of Autopoiesis," in *Emergence and Embodiment: new essays on second order systems theory*, (eds). B. Clarke and M.B. Hanson, (Duke University Press 2009), pp.62-75; quotation on p.72.

cept in accordance with what technique has imputed to them. The age of systems is one in which an outside to itself cannot be imagined.

Nicola Labanca makes the parallel case that systems thinking presupposes no fundamental differences between artifacts, humans, and animals. He relies on Giorgio Agamben's explanation of human potentiality in philosophy to argue that dominant instruments have diminished human potential. It is vastly more difficult to redirect an interstate highway than a country path. But the age of systems is even more destructive, says Labanca. It is not merely the potential to do this or that act which has been diminished. Rather, systems negate the very human potential or capacity to act. When integrated into systems via feedback loops, humans cannot step outside them. And then, just like machines which "cannot not do", people functioning as system subunits cannot not comply.

What Labanca uncovers from systems theory and cybernetics, Samar Farage brings into view from everyday life. She uses the smartphone as an exemplar of how people have been refashioned as nodes in a system. The smartphone was deliberately designed to collapse the distality between the user and the tool. Not only does it fully capture the social imaginary (my phone is the world) but its features are also specifically designed to create addicts who can neither put down nor put away their phones. Systems-cybernetics dismissed the idea of free will and action in theory. Smartphones suspend willed action in practice. The bleak prospect of an incurable addiction prompts the all too human question of what can be done.

The remaining articles in this issue pick up this question. Whereas Philippe Mesly outlines a theory of technique that reconnects human will to the world while preserving the distinction between the two, Giovanna Morelli calls us to remember and renew the culture of proportion, of conviviality, as the only way out of the impending morass. Curiously

Henry Zhu, a denizen of the digital spheres of virtual games and cryptocurrency, thinks it possible to recover something resembling the commons and conviviality. He believes the internet could function the way sidewalks of New York city as described by Jane Jacobs once did—publicly financed spaces put to common use.

It is also this sensibility and the discomfort with it, that is evident in the two books jointly reviewed for this issue. In *The Virtuous Cyborg*, Chris Bateman argues that we cannot escape our cyborg condition and must therefore find ways to become virtuous as such. In *Scorched Earth*, Jonathan Crary warns that the internet complex can only lead to the thoroughgoing despoliation of the earth and its inhabitants.

This issue of *Conspiratio* is bookended by an essay and a translation. In his essay, David Cayley responds to Mitcham's article published in the previous issue titled "A Competition of Corruptions." Cayley takes issue with Mitcham's argument for preferring "Asian Nihilism" to "Mediterranean disembedding" in the light of Illich's thesis that the modern world is the manifestation of *corruptio optimi pessima*. Attilio del Vinco's short statement in Italian was translated by Neto Leão. It invokes the stuff of tools, which were once and still are at hand, if only each of us would still re-member and could joyfully refuse the seductions of systems.

As a practical matter concerning *Conspiratio*, we are thinking of reducing the number of issues from two to one each year starting in 2024. This is part of finding the path forward for both *Conspiratio* and related efforts. The theme for the next issue intended for September 2, 2024, is *Nature*, broadly construed. It is not clear that 'Nature' has any denotative content and yet few contemporary arguments can be made without invoking it. The Anthropocene confers scientific credibility to the irreparable changes human activity has had on nature. Sustainability and greening the economy

have taken center stage in the techno-economic imaginary. In society and culture, some humans dream of a post-human future, others replace their organs, while yet others reshape their bodies, all in the attempt to escape natural limits.

I invite articles to clarify whether and how 'Nature' is indispensable to the search for the good and the true. The deadline for articles and other submissions for the upcoming issue of *Conspiratio* is May 1, 2024. If all goes well, I should be able to announce a meeting in which these articles can be publicly discussed prior to publication. That could mark the first step towards joining thought and life in the effort to think after Illich.

Sajay Samuel
State College,
November 2023.

Essays

On walking away from Christianity:
a reply to Carl Mitcham
by David Cayley

*In the juvescence of the year
Came Christ the tiger...Us he devours...
After such knowledge, what forgiveness?*
-T.S. Eliot, Gerontion

In the Spring 2023 issue of *Conspiratio*, Carl Mitcham presents a heartfelt account of his long wrestle with the ideas of Ivan Illich, and of his ultimate decision to “walk away” from his never quite fulfilled quest for Christian inspiration in favour of Buddhism. His essay raises a number of resonant and far-reaching questions about Illich’s teaching, and, since Mitcham expressly asks for a response, as well as giving considerable evidence of uncertainty and hesitation in the way he advances his argument with the master –he begins with an apology and asks humbly at the end for “correction”– I would like to take up some of the points he has raised. My attempt at an answer will be far from the *correction* Mitcham invites but will, I hope, introduce some considerations that may make Illich better understood.

Mitcham’s criticisms centre on the Latin adage that Illich claimed summed up the culture of Latin Christendom and the world-wide modernity that was its sequel: *corruptio optimi pessima*, the corruption of the best is the worst. Illich’s idea, in brief, is that the revelation of God in the person of Jesus Christ is the highest and greatest truth we can know, but that this truth is also uniquely volatile –and liable, when transformed into a source of power, to produce an evil which is bad to the same degree as the good it parodies and corrupts.

Mitcham, as I understand him, puts forward four main arguments. The first is that Illich presents his *corruptio* principle too starkly, as if it were a kind of trap from which there is no exit, thus leaving Mitcham as his reader in an “uneasy double bind” from which there is neither any way back nor any way forward. The second is that Illich uses a highly charged rhetoric – “monstrosity and horror” are the terms Mitcham takes as examples– which tends to overemphasize the violence involved in the institutionalization of the Gospel and to downplay or overshadow the “endemic orientation toward violence” of all the Abrahamic religions –a violence that Mitcham thinks is inherent in the “Mosaic distinction” by which the Israelites first learned to discriminate their *true faith* in the *one God* from all other beliefs and which then licenced and legitimated their conquest of Canaan and their extermination of the peoples then living in that Promised Land.¹ The third argument is that decay, decline and decadence –corruption– are natural processes inherent in all human undertakings and not in any way unique to Christianity. And, fourth and finally, Mitcham sees an embryonic “decisionism” in Illich’s reading of the parable of the Samaritan in which the Samaritan exhibits, Mitcham says, “a freedom of the will empowered with the ability to constitute by its action a new reality or relationship.”

Underlying these four explicit assertions is an idea that never becomes fully articulate but which I hope I can express, without doing too much violence to the subtlety and reticence of Mitcham’s argument, as follows: Mitcham is asking, I think, what if the problem is not so much the corruption of Christianity as Christianity itself? If corruption is inherent in all things and, consequently, inevitable, why cultivate a faith that will unavoidably degenerate into a unique and overmaster-

1 The idea of “the Mosaic distinction” is drawn from Jan Assmann’s *Moses the Egyptian* (Harvard, 1998). The conquest of the Promised Land, the land God gave to Abraham (Genesis, 12:7), is described in the biblical books of Joshua and Judges.

ing evil? Why not rather adopt an alternative like Buddhism, which may degenerate into nihilism when corrupted, but at least will not produce the horror and monstrosity before which Illich throws up his hands?

These questions take us deep into the heart of Illich's work. The first point I want to make is that Illich was himself an extremely reticent writer who generally said less than he knew. Back in his CIDOC days, he remarked to his friend John McKnight that he wanted to confine himself to *proscription* rather than *prescription*, never "tell[ing] people what they ought to do," and this remained a maxim throughout his life.² Had it not been for my persistence in asking him to expound the idea of *corruptio optimi pessima*, he might well never have done so. He had broached the idea a couple of times –for example in his "Hospitality and Pain," a sermon (his word) preached in Chicago in 1987– but never developed it in the extensive way that he did in my radio series, "The Corruption of Christianity" and its sequel *The Rivers North of the Future*; and it seems quite possible that these ideas would have remained unexpressed had I not crossed his path. This is not the normal procedure of a scholar eager to explicate his ideas. It is the undertaking of someone who lives according to what he discerns, from moment to moment, as the will of God. I find it utterly remarkable, and endlessly evocative, that a text which has so thoroughly shaped my understanding, as well as occupied my time, should be *contingent* in this way. Such spontaneity not only hints at a world breathtakingly different from the planned catastrophe in which we actually live, it also suggests that the fog of sin may be a lot thicker than we usually think. But the more immediate point I want to draw out of this instance is that Illich worked so much in this responsive mode that he can hardly be said to have had a doctrine at all.

2 "Part Moon, Part Travelling Salesman: Conversations with Ivan Illich," *Ideas*, CBC Radio, p. 31. The transcript is here: <https://www.davidcayley.com/transcripts>

This is explicit at various points in *The Rivers North of the Future*. It begins with Illich's adamant and repeated insistence that he is "no theologian" and that "no one can tell me that I am."³ He has often been disregarded on this point and treated as if he were what he says he is not, but I take him seriously. Moreover, I think he is renouncing more than just the "institutionally and juridically determined function" that is implied by the name of theologian in the Roman Catholic Church. I think he is, in a certain sense, bracketing theology altogether. Speaking of the early Christians' confidence that they could foresee and anticipate the end of things – "their happy trust that the light in the East would come tomorrow, and if not tomorrow, the day after tomorrow" – he says, "... what a privilege to live in a time that has lost its this-worldly calendar and watch-related scaffolding. We live in an age of scaffoldless hope." This is a radical account of contemporary disorientation and of our inability to name the time in which we live or to relate it to the history with which it seems in so many ways discontinuous. In this *aporia*, this dark silence, this interruption, which is a blessing – a privilege – only if we can learn to inhabit it without grasping for premature consolations, theology loses its power to make authoritative statements. In the same spirit, in *The Rivers North of the Future*, he refers modestly to his claim that modernity is perverted Christianity as no more than a "research hypothesis."⁴ He calls it this, he says, because he wants his proposal to be understood not as a thesis, a definite proposition, but as what Marshall McLuhan liked to call a "probe," a way of seeing, a way of bringing things to light.⁵ He also says that the "research themes" he is putting into consideration will require

3 *The Rivers North of the Future*, House of Anansi, 2005, p. 121

4 *Rivers*, p. 68

5 *Rivers*, p. 191

a great deal of further study, claiming with regard to one of these themes – “the lines of evolution that link...the medieval Church to the emergence of the modern state” – that he “would need six or seven colleagues, each following one of these lines, and reporting back in two years, to do this subject justice.”⁶ All this suggests a highly tentative approach, the approach of a man who, for all his eloquence and erudition, is still feeling his way.

Turning now to Mitcham’s specific criticisms, let me first take up the idea that Illich focuses too relentlessly on the shadow side of the Incarnation. Developing the idea of *felix culpa*, the happy Fall, whereby the loss of Eden is seen as the necessary preface to our salvation – “Nor had one apple taken been...Then had never Our Lady A-been heaven’s queen,” as an old song says⁷ – Mitcham asks why Illich pays so little attention to the idea that “the corruption of the Gospel could, in God’s providence, be prefatory to a greater good,” concentrating instead on the corruption itself. Here let me quote Illich himself from a passage concerning the mystery of evil, or *mysterium iniquitatis*, the phrase by which Jerome’s Latin Bible, the Vulgate, rendered the apostle Paul’s claim in his Second Letter to the Thessalonians that with the appearance of the Christ, a “mystery of lawlessness” had also been introduced into the world and was already “at work.”⁸

...Only faith can fully discern the mystery of evil. But I know that there are many who have experienced the horror of our time as something that they can’t explain away,

6 *Rivers*, p. 191

7 “Adam Lay Ybounden,” a Middle English song text from the 15th century which has been given many modern choral settings.

8 The Second Letter of Paul to the Thessalonians, 2:7; the Greek word in this verse, which Jerome rendered as *iniquitatis*, and the Revised Standard Version translates as lawlessness, is *anomos*. Some scholars dispute Paul’s authorship of this letter but that is beside our point here.

and that it would be cowardice to relegate to some locked corner of their heart. Those who are willing to face the horror as something unexplainable act as witness for a mystery. That this mystery is the *mysterium iniquitatis* does not make it less fit to be the *entrance* door into the entire mystery of the Incarnation. Out of the mouth of babes and sinners.⁹

The first thing to notice about this passage is the use of the word mystery, a word which Illich uses, not in the sense of a puzzle not yet solved, or a problem not yet untangled, but with reference to something which lies beyond the amplitude of our minds, something which our thought, by its nature, cannot penetrate. This is important, I think, because it indicates a mode of thought which takes its disabilities and limitations as a primary given. Illich confesses, in other words, that he does not understand the *corruptio optimi pessima* – it belongs to what he once described to me as “the darkness of God.” Faith can discern the existence of this mystery, insofar as faith can recognize the abysmal difference between the original and its corruptions, but it remains a mystery why things should have happened in this way. Beyond Illich’s agonized confession, which Mitcham quotes, that contemplation of its sinister consequences creates “the temptation of cursing God’s Incarnation,” he does not second guess the will of God in the way implied by Mitcham’s question: “...why not allow the corruption to sponsor a questioning of the original doctrine?” This is the bold question that has Mitcham heading for the exits, but it is not one Illich can ask. That would imply that he could penetrate the mystery, take away what he could never wish removed – the best that has become the worst – and reshape things accordingly.

A second remarkable feature of the statement I have

quoted is the suggestion that the mystery of evil is a back-door into the mystery of the Incarnation –a negative revelation which might yield a positive image in the same way that a photographic print is developed from its negative. Jesus predicts that “the end will come” only when “this gospel of the kingdom [has been] preached throughout the whole world, as a testimony to all nations.”¹⁰ Illich’s statement allow this prophecy to be read ironically. Perhaps the gospel *has* been preached throughout the whole world and is even now recognizable by those who are willing to face the uncanny and unsettling quality of our present moment, and, yes, even its horror. This might still be an entrance, as Illich says, a way in, and, perhaps, a way back to the “original doctrine” that Mit-cham seeks. Might this explain why Illich “explores” and “attempts to characterize” the corruption rather than presenting a more solacing view of its providential character as a happy fall that is “prefatory to a greater good?” Perhaps he thought that his *via negativa* –his negative way– with its focus on critique and proscription, would yield this more positive vision, so long as it were pursued courageously and not “relegated to some locked corner of the heart.” But, confronted with a mystery in the sense I specified earlier, he couldn’t actually know this.

Illich’s *corruptio* hypothesis was new, and alarming, and some of his closest associates thought he was unwise to speak as openly to me about it as he did. Charles Taylor recognizes this novelty in his preface to *The Rivers North of the Future* when he says that Illich “changes the very terms of the debate” concerning “the place of Christianity in Western modernity.” For Illich, Taylor says, modernity is “neither the fulfilment, nor the antithesis” of Christianity, neither its secularization

10 Matthew 24:14

nor its overcoming, but rather its perversion.¹¹ At the time Illich decided to chance an exposition of this idea in the fourteen improvised monologues that he allowed me to record in 1997 and which form the first half of *The Rivers North of the Future*, he felt himself to be “pretty much alone” among historians in his supposition that “modernity can be studied as an extension of Church history.”¹² When I began to investigate his hypothesis after his death, I did find a number of scholars who were working in parallel with Illich. Charles Taylor, who was preparing his *A Secular Age* (2007) at the time of Illich’s death, is one example. Or consider this statement from the concluding pages of John Milbank’s *Theology and Social Theory* (1990): “In the midst of history, the judgment of God has already happened. And either the Church enacts the vision of the paradisaal community which this judgment opens out, or else it enacts a hellish society beyond any terrors known to antiquity: *corruptio optimi pessima*.”¹³ This certainly sounds like Illich, even down to the type of rhetoric –*hellish, terrors*– that Mitcham finds inordinate. René Girard presents the same idea: after the Crucifixion, things will get better and worse *at the same time* because the sacrificial mechanism by which cultures formerly kept the peace with a homeopathic dose of violence has been exposed and disabled, leaving us, Girard says, with “nor more protection against our own violence.”¹⁴

All these thinkers agree that the Christ event –the Incarnation– is not an event in history, but rather the invention

11 *Rivers*, p. ix

12 *Rivers*, p. 75, 69; in the passage on p. 75 Illich describes himself as “pretty much alone” in finding “the origin of the modern conception of tools” in the uniquely Christian “spirit of contingency,” but I think he felt just as alone in relation to his entire *corruptio* hypothesis.

13 John Milbank, *Theology and Social Theory: Beyond Secular Reason*, John Wiley and Sons, 2008/1990, p. 442

14 “The Scapegoat: René Girard’s Anthropology of Violence and Religion,” Ideas, CBC Radio, 2001, p. 40; the transcript is here: <https://www.davidcayley.com/transcripts>.

of history; not the creation of a new religion but the demystification of religion itself; not a moment in time but the very pivot on which time turns. Apocalypse, says Ludwig Wittgenstein, is “the view...that things don’t repeat themselves,” and Christianity is an apocalyptic religion.¹⁵ It foresees a final judgment, a decisive ending, and not “the eternal recurrence of all things” that Nietzsche’s Zarathustra preached.¹⁶ Illich, following his *via negativa*, may emphasize the worst into which the best degenerates, while Girard more even-handedly demonstrates their interrelation, but both finally agree that the God who acts *on* history has entered *into* history. Illich once recalled for me a young nun who had asked him earnestly why God had stopped speaking to us, as God evidently had in Biblical times, and then answered her own question by supposing that He might have nothing more to say. The story delighted Illich because it so precisely and innocently illustrated the point I am trying to make. The Incarnation is God’s last word, his final throw of the dice, the point at which humanity must awaken to its own God-nature or begin to worship itself. This character is explicit in the “You have heard it said... but I say to you” structure of the Sermon on the Mount. This either/or can be expressed in a hundred ways, but it can’t be avoided. When Christianity begins to avoid it and slips back into the rut of religion, the *mysterium iniquitatis* goes to work.

Mitcham asks: “Why is it not possible to return to the pre-Christian cosmos that exists on its own in self-sufficient and self-subsistent splendor?” For the Christian, the answer, obviously enough, is: you can’t erase the Incarnation because it has happened. “The surprising and entirely new flowering of love and knowledge” which Illich believes has been made possible by the Incarnation has become a permanent part of

15 Ludwig Wittgenstein, *Culture and Value*, Oxford: Blackwell, 1970, p. 56

16 *The Portable Nietzsche*, ed. Walter Kauffman, Viking Press, 1954, p. 333

the human repertoire and can't be taken away.¹⁷ And yet there certainly has been a powerful neo-pagan current in Western modernity, going all the way back, some would say, to the incorporation of Aristotle into Scholasticism. What Illich shows, I think, is that the (consequences of belief in the Incarnation must be as real for the historian as it is for the one who perceives it through the eyes of faith. We live not just with the "new flowering" that the Incarnation made possible but also with the overwhelming historical consequences that have been induced by those who have believed and who still believe that they can appropriate and administer this Gospel. This is what I think Illich means when he says: "You can't take the Crucifixion away if you want to understand where we have arrived at."¹⁸ He means that Christianity has by now been ingrained into our languages, our institutions, and our mentalities and ingrained much deeper than conscious thought, so that we are often unaware of this pervasive influence. This is why Illich calls our time "the most obviously Christian epoch," even though he recognizes how "paradoxical" this claim must be in a time when enlightened opinion believes that it has thoroughly overcome Christianity and now retains it only as a scapegoat. This paradox, by now, lies many layers deep. The extravagances of persecutory "wokeness," for example, constitute what Girard calls a "super-Christianity," but this attitude is impregnably defended against recognizing itself as such.¹⁹ The rejection of history that can be seen in contemporary "cancel culture" works in the same way to hide the sources of our culture. The result is impotence and misdirection. We cannot get to grips with our situation because we cannot recognize how it came to pass. We cannot turn off the dy-

17 *Rivers*, p. 47

18 *Ivan Illich in Conversation*, House of Anansi, 1992, p. 243

19 Girard made this remark in 2001 when the hyper-orthodoxy of wokeness was still called political correctness. See *The Scapegoat*, transcript, p. 47

namo because we can't see how it was turned on in the first place. But there is no way out of this dilemma, Illich insists. To dream of a return to the pre-Christian cosmos –to dream of the restored innocence which various “waves of post-modernism” have made “the mood of the new age”– “tastes,” Illich says, “of abdication.”²⁰

Perhaps Illich is wrong. Mitcham, in the last analysis, seems to have concluded that he is. But, if Illich is right, then there is no going back. There is no “pre-Christian cosmos” available, no Heideggerian god to save us.²¹ But the “entrance door” that presents itself to us through contemplation of the mystery of evil –even if it begins only as a meditation on the uncanny singularity of our time –is “no less fit,” Illich says, than the door that faith opens– a remarkable statement and one which invites reflection. If the Gospel has been turned “inside out” and this inversion is real and effective all around us, then the task is first to turn it right side out before thinking that we can reach a judgment on the validity of what Mitcham calls “the originating doctrine.”²² Illich says that “by studying the West as the perversion of Revelation I become *increasingly tentative*, but also *more curious* and totally engaged in *searching* for its origin, which is the voice of him who speaks.”²³ [my italics] That God speaks is not in question here, but the words *tentative*, *curious*, and *searching* all suggest that we cannot just set aside the perversion and resume walking with God in the garden “in the cool of the day” as if nothing had happened.²⁴ A long history –a history which is part of us, even as we are

20 Rivers, p. 182

21 Heidegger told the German newsmagazine *Der Spiegel*, in an interview he allowed to be published only after his death: “We have reached the point where only a God can save us.” (*Der Spiegel*, May 31, 1976)

22 “Hospitality and Pain” - https://www.pudel.samerski.de/pdf/Illich_1423id.pdf - p. 1

23 *In Conversation*, p. 243

24 Genesis 2:8

part of it— has first to be unthought and rethought— a task that can't even begin until it is recognized that the temporal horizons in which we normally locate ourselves —the whole Antiquity/Middle Ages/Renaissance/ Enlightenment/ Modernity/Post-Modernity scheme— may be seriously misleading. None of these terms are innocent or merely descriptive. The Renaissance was invented in the early 19th century to erase the Reformation from the pedigree of the French Revolution and substitute the sanitized classicism that was supposedly being reborn among the political horrors of Quattrocento Italy.²⁵ The light of the Enlightenment was kindled against the darkness of supposed Christian obscurantism. The Middle Ages were a Protestant invention, designed to portray the Roman Church as a corrupt interlude between primitive Christianity and its revival in Wittenberg. My point, simply, since this is not an essay on the periods into which history should properly be carved, is that the pregnant names in current use all embody some element of anti-Christian or intra-Christian polemic, and so tend to obscure the history which Illich's *corruptio optimi pessima* tries to bring to light. Can we “return” from the world Christianity has made, or reassess its “originating doctrine,” without first getting to grips with the unique and already achieved character of this world?

One of my assumptions here —one that I learned to make in reflecting on Illich's approach to history —is that past and future are indissolubly connected and change in lockstep with one another. What the future can be depends on what we think the past was, and what we think the past was depends in turn on how we imagine the future. James Carse, in his useful book *Finite and Infinite Games* writes, “With each surprise the past reveals a new beginning. Inasmuch as the

25 Eugene Rosenstock-Huessy, *Out of Revolution: Autobiography of Western Man*, New York, William Morrow and Company, 1938, p. 699

future is always surprising, the past is always changing.”²⁶ Illich said many times that he was sustained by the “hope of... being surprised.”²⁷ Carse helped me to see that surprise, in changing some aspect of the future, also changes the past. He distinguishes what he calls “finite games” –games with a definite and conclusive outcome– from “infinite games” which are conducted “for the purpose of continuing the play.” “Surprise,” he says, “causes finite play to end; it is the reason for infinite play to continue. Surprise in infinite play is the triumph of the future over the past. Since infinite players do not regard the past as having an outcome, *they have no way of knowing what has been begun there.*” [my italics] And that is how what Carse calls “new beginnings” are revealed. Illich puts the past in question in exactly this way, it seems to me. He soars above the historical landscape –like an eagle, his friend and collaborator Ludolf Kuchenbuch once said –in search of turning points, moments at which he can discern beginnings and endings because these moments exist in a still molten, not yet hardened and fixed state.²⁸ This method can seem hyperbolic, when taken in the wrong way. In the essay “Vernacular Values,” for example, the Spanish humanist Antonio Nebrija’s first grammar of the Castilian tongue, published at the end of the 15th Century, is made rather unfairly emblematic of all subsequent deformations of language. Nebrija is accused of firing the opening shot in “a five-century war against vernacular subsistence,” of trying to “chemically...synthesize...a language,” and of wanting to “suppress untutored speech.”²⁹

26 James Carse, *Finite and Infinite Games: A Vision of Life as Play and Possibility*, New York: Random House (Ballantyne paperback edition), pp. 22-23

27 “Commencement [Address] at the University of Puerto Rico,” *New York Review of Books*, Oct. 9, 1969, p. 15

28 Kuchenbuch’s comparison was made during a talk at a private gathering at the home of Uwe and Gunhild Pörksen to mark the tenth anniversary of Illich’s death and has not, so far as I know, been published.

29 Ivan Illich, *Shadow Work*, Marion Boyars, 1981, p. 33, 35

This is a heavy indictment to lay against a grammar book, especially when the charge is being entered by a keen grammarian and self-confessed “bibliophile” like Illich, but the point, I think, is not to blame the benighted Nebrija but rather to bring to light a moment at which *things might have been different*.³⁰ Illich’s reading of Hugh of St. Victor runs along the same lines, even though Hugh as a beloved interlocutor gets what appears superficially to be an utterly different treatment than Nebrija’s supposed “invasion” of the vernacular. The profound similarity is that Hugh too is discovered to be at a turning point, an instant at which, as Elliot says, “past and future are gathered,” a moment of transparency.³¹ Hugh stands on a cusp where Illich detects the beginning of the fateful split between head and heart, and between intellectual and spiritual formation, that will give birth to the West’s by now seemingly unstoppable technomania. But Hugh also points backward into the world of “monkish reading” where the wisdom embodied in books still enclosed and surpassed the reader.³² Hugh’s writings propose a philosophy of technology, in which the “mechanical arts” are seen as a “mirror of truth.”³³ This philosophy died stillborn within a generation as “monasteries,” Illich says tartly, were “converted,” with uncritical enthusiasm, “into machine parks,” but, even so, Illich can apprehend in Hugh’s approach a possible “new beginning”—a different past pointing to a different future, a different future yielding a different past.³⁴

30 Ivan Illich, *Text and University*, p. 6 - <https://www.pudel.samerski.de/pdf/TEXTANTL.pdf>. Illich actually says “biblionome” and describes his experience as “biblionomic”; I have substituted the more recognizable word bibliophile for clarity’s sake.

31 T.S. Eliot, *Four Quartets*, New York: Harcourt Brace and World, 1943, p. 5

32 Illich describes this turning point at length in *In the Vineyard of the Text* (Chicago, 1993) and again in “Text and University,” op. cit.

33 See “Research by People,” in *Shadow Work*, pp. 77-95, particularly p. 90

34 “Research by People,” p. 91

Mitcham portrays Illich as, in effect, all dressed up with nowhere to go - “trapped,” Mitcham says, between the radiance of the Incarnation and its “disastrous consequences.” I see him as proposing a visionary practice of historical study in which a new past and a new future, north of the future, can be seen arising together. Illich’s approach can hardly be called a method, as it is more of an anti-method, but whatever it is called, I would like to see it first tried before it is rejected. I do not pretend to know what we will finally see through the lens of *corruptio optimi pessima*, what we will ultimately find if we enter “the entire mystery of the Incarnation” through the back door provided by a steady and courageous contemplation of the mystery of evil. All I am saying is that I think this attempt has barely begun. Illich’s sketch remains a sketch, his hypothesis a *hypothesis*.

Mitcham criticizes Illich’s “rhetorical imposition,” and even “violence,” in deploying terms like “monstrosity” and “horror” to describe modernity. Surely there is something “contrived” or “artificial,” Mitcham says, in using words usually reserved for “slasher movies” to describe a “trajectory of spiritual decay or unintentional reversal.” Reading these words summoned a vivid memory of a talk I heard Illich give in the German town of Wörpswede in December of 1990. He claimed in this talk –later circulated as “Health as One’s Own Responsibility: No Thank You!”– that a “new ethics of responsibility for health” portended “a bottomless evil which Hitler and Stalin did not reach,” and I remember still how I bridled at that phrase.³⁵ Surely it was somewhat obscene in the midst of peace and prosperity, and after a good dinner among friends, to claim that “responsibility for health” was in any sense worse than the genocides committed by Hitler and Stalin. Well, it’s true that Illich sometimes liked to shock his

35 (“Health as One’s Own Responsibility – No Thank You!” p. 3: https://www.pudel.samerski.de/pdf/Illich_1429id.pdf)

audiences, but the intervening years have shown me that he spoke quite carefully and deliberately that night. What Illich wanted to do, I now think, was not to engage in the inevitably invidious game of ranking horrors –he urged people to avoid such “apocalyptic randiness”³⁶– but rather to draw attention to the unprecedented character of the times he was trying to understand. He did not say that responsibility for health was a worse evil than the Holocaust or the Holodomor, he said that it was unlike these great evils in being *bottomless*. The crimes of Stalin or Hitler, terrifying as they were, could still be plotted on a historical continuum –they had an end, a bottom, a precedent. Contemporary care with its totalitarian ambition and suffocating sentimentality has no end– it swallows reality itself. It is an “evil without meaning” because it destroys all personal significance. What Illich called the “mysterious historicity” of each existence –its bearing a meaning which can never be fully known from the outside– is blotted out by the vast abstraction of *life* in general which it is our duty to manage and save at all costs. How could Illich not have seen this as a horror and a monstrosity? The “best” was not something from which he could turn aside. The evil he believed it had produced was not something he could ignore. He believed that the phenomenon which he found “marvellously expressed” in the phrase *corruptio optimi pessima* was “constitutive of the West” –no less– and of that West which had “shaped him body and soul, flesh and blood.”³⁷ Where else could he turn?

A final point concerning the incipient “decisionism” towards which Mitcham thinks that Illich’s interpretation of the parable of the Samaritan “points.” The Samaritan, in Mitcham’s reading, exhibits “a freedom of the will empowered

36 See *Illich in Conversation*, p. 127

37 Hospitality and Pain, p. 1

with the ability to constitute a new reality.” This seems to me to overlook the fact that the Samaritan, in Illich’s reading, feels *called* to act as he does. It is the reality and urgency of this call that allows and authenticates his action. His will may be involved in his executing the action which he feels called to perform, but it is the call which comes first. One can, of course, ask whether ethics can ever be reliably founded on an experienced call rather than on a set of rules – that is the question Illich’s critics have asked again and again, and I will not attempt an answer here – but I do want to insist that the call, not the will, is primary.

Mitcham says that Buddhism appeals to him in part because of its “ahistoricist character.” It is certainly true that Buddhism has never sought to define and rule history in the way that Christianity has. But it is also true that the one-way history that Christianity invented, by its claim of universal validity, has now actually become, willy-nilly, a universal fate. This being the case, I don’t think we can understand the resulting historical predicament without some version of Illich’s hypothesis that the good and the bad of this situation are inherently related and mysteriously entangled. The decision here is not for one “religion” or another. If we accept Simone Weil’s claim that Christianity ought to contain “all vocations, without exception,” or Illich’s assertion that the Gospel’s good news might have been made compatible with many forms of life as their completion and crowning proportion, not their abolition, then various forms of Christian Buddhism or Buddhist Christianity should be possible.³⁸ The point towards which I have been stumbling here is that we don’t exactly know what Christianity is in the first place, since most of the names and historical schemes which we now have in place mislead and misdirect us – the very

38 Simone Weil, *Waiting for God*, Harper and Row Perennial Library, p. 75: *Rivers*, pp. 196-197

word Christianity not the least. Carl Mitcham sees Illich as “trapped” between “the doctrine [of the Incarnation] and its consequences.” I see him as proposing an untried path by which the presently obscured meaning of that doctrine might be recovered through a courageous and clear-eyed investigation of the results of its misappropriation.

Thematic Articles

50 years after *Tools for Conviviality*

p. 39-40 | Andre Barone
Untitled (after drawing by Ernesto Bonato), photography, 2023
21,6 x 14,2 cm





Tools for Conviviality: Argument, Insight, Influence*

by Carl Mitcham

Ivan Illich is the author of more than ten books during the last twenty years published in over a dozen languages. In their diversity these works can appear to defy thematic unity. Their focus seems variously to be pastoral theology, education, development policy, medicine, economics, urban planning, gender, literacy. What follows is an exercise in taking one of these books, *Tools for Conviviality*, as central to the Illich corpus as capable of benefiting from a detailed interpretive analysis.¹

The rationale for focusing on *Tools for Conviviality* can be articulated as follows: Illich's first books which are not simply collections of previously published essays are *Deschooling Society* (1971), *Tools for Conviviality* (1973), *Energy and Equity* (1974), and *Medical Nemesis* (1976). The next monograph does not appear until six years later, with the publication of *Gender* (1982). The initial four monographs thus constitute a kind of founding set, circumscribed by time. It is also the case that among these books the first, third, and fourth are case studies of particular problems - that is, schools, transportation, and medicine - with the third being more an extended essay than a monograph.² Only the second, *Tools for Conviviality*, is a general analysis. It is, moreover, a volume that refers back to preceding work and anticipates work still to come. It is the book to which Illich makes the most explicit references in later

* Paul T. Durbin (ed.), *Europe, America, and Technology: Philosophical Perspectives*, 17-56. © 1991 Kluwer Academic Publishers. Printed in the Netherlands.

work.³ Its centrality is not only temporal but substantial, thus calling for extended consideration of its argument.

I. ARGUMENT

The argument of any text is situated within an expository structure. *Tools for Conviviality* is composed of five chapters. The central and longest is chapter 3, "The Multiple Balance." This is, however, divided into six numbered and named sections. The largest undivided section in the text is chapter 2, "Convivial Reconstruction." Chapter 2 consists of thirty-six pages, chapter 3 of thirty-eight. No other chapter is more than sixteen pages in length. A cursory inspection of the overt features of the book thus suggests that these two chapters constitute, in different ways, complementary centers.

Exactly how the center is a center is, however, prepared by a beginning. Preceding the first chapter are sections entitled "Acknowledgments" and "Introduction." The acknowledgments are extensive and mention by name over fifty persons from countries in Europe and North, Central, and South America. The Center for Intercultural Documentation (CIDOC) is also explicitly credited. It is clear from the acknowledgments that this is to some extent a cooperative text or a text that grows out of cooperative effort.

The introduction begins by defining this cooperative text as part of a larger work-in-progress, "an epilogue to the industrial age" (p. xxi). Illich says that he wants "to trace the changes in language, myth, ritual and law which took place in the current epoch" (p. xxi). Illich thus identifies his work with the owl of Minerva taking wing at the end of the day. But Illich also immediately declares that he wants "to show that two thirds of mankind still can avoid passing through the industrial age, by choosing right now a post-industrial balance in their mode of production which the hyperindustrial nations will be forced to adopt as an alternative to chaos" (p. xxi). Not only is Illich looking back with the owl of Minerva,

he is looking forward with the cock of Athena.

The introduction further mentions how this book is part of a publishing series entitled "World Perspectives" edited by Ruth Nanda Anshen. *Deschooling Society* was in the same series.⁴ To emphasize the connection, Illich summarizes three conclusions of CIDOC research that are presented in that previous text. But, he suggests, the conclusions of *Deschooling Society* can be generalized - which is thus evidently the function of the present effort.

The most general conception to be found in *Deschooling Society* is a distinction between what are termed "right manipulative" and "left convivial" institutions. This distinction, which is developed in the central chapter of his first monograph, provides the title of the second monograph.

As an initial cut at the basic generalization of the present text, however, Illich puts forth the thesis that industrial growth in both goods and services can, up to a certain level, be beneficial, although afterward further expansion readily becomes detrimental. This foreshadows the explicit argument of the first chapter, a case study of how medicine illustrates these two turning points. His basic interest, however, is "a general theory of industrialization" (p. xxiii) that would assess the relation between human beings and tools in a multidimensional framework. This, it will turn out, foreshadows the concerns of chapters 2 and 3, the already suggested central chapters.

At the end of the introduction Illich offers a comment on his title and use of the term "convivial" or "conviviality." In an italicized sentence he writes that "*a society, in which modern technologies serve politically interrelated individuals rather than managers, [he will] call convivial*" (p. xxiv). He admits this is a potentially misleading term, but chooses it as a challenge to thought, and associates it with self-limiting discipline and austerity in the classical sense of Aristotle and Aquinas.

As he says, "Austerity is a virtue which does not exclude enjoyments but only those which are destructive of personal relatedness" (p. xxv). Conviviality names that disciplined being-with-others expressed through serious but playful enjoyment.

Some self-limitation is necessary for living with (Latin *con + vivo*) others, for friendship and its playful engagements. Austerity is that virtue which is necessary to delimit or restrict irrelevant elements and distractions that can undermine the play which is constitutive of and makes possible pleasurable being together with others. The sexual connotation of the word "tool" - and the need for active but sparing use of the male organ if "conviviality" is to be maintained - is not unrelated to Illich's fundamental argument. It will be further suggested that tools *for* conviviality must be tools of conviviality; conviviality cannot be accidentally superimposed on just any tools by the intentions of users or agents. Finally, conviviality has implications not only for living with other persons, but also (and even) for living with other tools. Some tools inhibit not only certain human relationships but also relationships with other kinds of tools. Otherness in Illich's context includes more than persons.

At this point Illich introduces one of only two footnotes in his text, a reference to Hugo Rahner's *Man at Play*. (Hugo is the brother of the influential Catholic theologian Karl Rahner.)

The first chapter, "Two Watersheds," uses the example of medicine, an example that will be developed at much greater length and with copious footnotes in Illich's subsequent book, *Medical Nemesis*. The "two watersheds" argument can be stated succinctly as follows. The first "watershed" or threshold in medicine occurred around 1913, when a diseased patient began to have a better than even chance that a professional physician would be able to provide effective treatment.

The second threshold occurred during the mid-1950s, when modern professionalized medicine began to cause as well as cure disease.

The rise of iatrogenic illness to prominence in medical care creates a new kind of medicine. From this point on medicine will spend increasing time dealing with problems it causes - from staph infections caused by residence in hospitals, and bacilli which have become immune to sulfa drugs or first-generation antibiotics, to the mistakes or complications of surgery and debilitating therapies. Indeed, it is possible that more than fifty percent of the effort in modern medicine is now devoted to dealing with problems or illnesses that would not exist if modern medicine itself did not exist. Certainly, the problem of testing and evaluating medical procedures (both pharmacological and technological) has become an increasing concern of the medical community.⁵

At the conclusion of chapter 1, Illich states that the two watersheds phenomenon is not limited to high-tech medicine, but inherent and manifest in many branches of modern technology. Moreover, "development" beyond the second threshold depends on a combination of ideological inertia with conceptual transformations that are typical of social institutions. Insistence that, since previous technical change has been beneficial, further technical change should be too, is reinforced by subtle re-definitions of goals in technical terms dependent on professional expertise.

At first new knowledge is applied to the solution of a clearly stated problem and scientific measuring sticks are applied to account for the new efficiency. But at a second point the progress demonstrated in a previous achievement is used as a rationale for the exploitation of society as a whole in the service of a value which is determined and constantly revised by an element of society, by one of its self-certifying professional elites (p. 7).

It is technical imperatives of professionalized medicine, not the health care needs of the general public, that have, since the mid-1950s, driven the course of medical change through coronary bypass operations and hysterectomies, computerized tomography, nuclear magnetic resonance, and positron emission tomography scanners, organ transplants, artificial hearts and so on. It is professional scientists and engineers who argued in the late 1940s for establishment of the National Science Foundation as a means for the governmental support of science and technology independent of military or political supervision - for the good of society, of course. It is similar self-certifying professional elites who defend the Human Genome Project and the superconducting supercollider.

This first chapter sets the stage for the general issue to be addressed by the remainder of the book: how to avoid or respond to the second threshold, after which technology begins to be less unambiguously effective in meeting basic human needs. The simple answer is that somehow technological development must be limited or altered in its direction. The "more" ideology - more technology, more science, more political management, even more information and interdisciplinary research - is not the solution.

Any attempt to alter a social or technological process will include one or both of two elements: the carrot and the stick. Chapter 2, "Convivial Reconstruction," is (as it were) the carrot of imaginative alternative possibilities. Chapter 3, "The Multiple Balance," presents the stick of crisis or necessity that will force us to actualize these possibilities. Chapters 2 and 3 thus provide a kind of systole and diastole of Illich's argument.

This systole-diastole character of the argument is repeated in foreshortened form by chapters 4, "Recovery," and 5, "Political Inversion." The former articulates the ideals behind three obstacles to the development of a politics of tools; the latter, how these obstacles can be overcome or how a politics of

tools might be forced upon us. Following an introduction into the heart of Illich's argument, there is a kind of fourchambered beat that takes us through it, and then places us back in the body of our own lives.

The first beat of this four-chambered heart is chapter 2. As the first, it is also, and in this sense, the most important; it sets the rhythm for all that follows.

Chapter 2, with two untitled breaks in its text, can be divided into seven sections. The first three sections fill sixteen pages and are punctuated by a break; the next three sections again fill sixteen pages, punctuated by a second break; the last section covers four pages.

In the first or introductory section of four pages, it is emphasized that the essence of what is needed is a new conception or understanding of tools and, indeed, new kinds of tools. It is this new understanding or perspective on tools, and the attempt to identify the new kinds of tools to which this understanding leads, which is the theme of chapter 2 - and, indeed, of the book.

The key issue for Illich is that people "need new tools to work with rather than new tools that 'work' for them" (p. 10). The distinctive character of modern technology is its tendency to become progressively independent of sustained human engagement. "People need not only to obtain things, they need above all the freedom to make things among which they can live, to give shape to them according to their own taste and to put them to use in caring for and about others" (p. 11). To procure for themselves these new kinds of tools, there must be developed a new politics. This new politics of tools

would aim principally to exclude the design of artifacts ... that are obstacles to the exercise of ... personal freedom. Such politics would limit the scope of tools as demanded by the protection of three values: survival, justice, and self-defined work (p. 13).

Illich notes, in passing, that these ideals may well be violated temporarily in any historical transition from the present politics of tools which promotes the expansive and virtually unlimited development of what might be termed autonomous tools to a more austere conviviality of engagement tools.

In a second four-page section Illich itemizes six issues he will not address in the discussion that follows. He will (1) not provide utopian solutions, (2) nor a manual for action, (3) nor focus on the character of users. He will (4) not sketch political tactics or strategies, (5) nor detail the applications of distributive and participatory justice. He (6) admits that a convivial society will include some inequality, and that modern convivial tools "would be incomparably more efficient than primitive and more widely distributed than industrial [machines]" (p. 17). Illich is not an egalitarian democrat, but neither is he the proponent of a romantic return to preindustrial life simply construed.

Having specified what the focus is not, Illich undertakes a transition to his primary theme, which he calls the specification of "negative design criteria for technological devices" (p. 18). Although it is such criteria that must ground any politics of the limitation - or any politically implemented delimiting - of tools, this is not, he warns, a thesis which is easy to broach or appreciate. Industrialized disengagement from tools, not to mention the promotion by educational institutions of the political ideology of the expansion of autonomous tools, clouds the common mind. There are implicit references, once again, to *Deschooling Society*.

With this transitional warning Illich turns in the third section to the crucial argument of his text. (This third section of six pages constitutes the most sustained and concentrated passage in the whole book.) Illich begins by defining a tool "broadly enough to include not only simple hardware such as drills, pots, syringes, brooms, building elements, or motors,

[along with] large machines like cars or power stations, [but also] productive institutions such as factories...and productive systems for intangible commodities such as those which produce 'education,' 'health,' 'knowledge,' or 'decisions'" (p. 20). His concept of tool subsumes "into one category all rationally designed devices, be they artifacts or rules, codes or operators, and [distinguishes] all these planned and engineered instrumentalities from [those which] in any given culture are not deemed to be subject to rationalization" (pp. 20-21). A tool is any explicitly articulated rational structure, whether material or cultural.

Among this broad spectrum of tools, what kinds satisfy the criterion of conviviality? The common idea is that tools in this broad sense are able to be used to promote conviviality or non-conviviality - or any other ends - depending on end-user intentions and the social processes within which they function. The issue is primarily one of intention or use, individual or communal.

But according to what Illich has already said, his "subject is tools and not intentions" (p. 14). He wants to "focus on the structure of tools, not on the character structure of their users" (p. 15). Although it is true that "an individual relates himself in action to his society through the use of tools that he actively masters," it is also the case that "he is passively acted upon" by his tools and that "the shape of the tool [can determine] his own self-image" (p. 21).

The use of industrial tools [for instance] stamps in an identical way the landscape of cities. . . . Highways, hospital wards, classrooms, office buildings, apartments, and stores look everywhere the same. Identical tools also promote the development of the same character types. Policemen in patrol cars or accountants at computers look and act alike all over the world, while their poor cousins using nightstick or pen are different from region to region (p. 15).

Two points are to be noted here. One is that technologies make or transform users as much as makers or users transform technologies or the world. The other is that some technologies (namely, modern technologies) homogenize their world and their users, whereas others (traditional technologies) leave natural diversities intact. This means that "the progressive homogenization of personalities and personal relationships cannot be stemmed without a retooling of society" (p. 15). "Convivial tools are those which give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision" (p. 21).

To consider this principle more clearly in relation to the structure of tools, Illich begins by distinguishing hand tools from power tools. The hand tool uses human metabolic energy, the human sensory organs, and the human mind in order to perform specific tasks which are not strongly determined in advance. The hammer, for example, depends on muscular energy from the arm and the sensorimotor intelligence of internal balance, proprioception, and hand-eye coordination to perform a diversity of tasks: nailing and pulling nails in timber, planks, drywall, shingles, etc., while constructing houses, barns, crates, or furniture.

By contrast, the power tool uses non-human energy, that is, is moved more or less by energy from outside the human body: from domesticated animals, wind or water, heat and steam, internal combustion engines, or electricity. Human engagement with an externally powered tool tends to be limited to hand-eye coordination for the performance of increasingly predetermined and specialized functions. There is one kind of nail gun for drywall, another for shingles, with neither being interchangeable or usable for fastening timber or planking.

As the power tool is transformed into the machine, the human being becomes not so much the user as an operator

or monitor. Already with draft animals attached to plows, for instance, users have to do more watching of what is going on than if they were hoeing or raking, but they still have to take care of living "energy sources" which also require guidance operating through multiple sensorimotor engagements (sensorimotor coordination of hand-eye, eye-sound, sound-hand and feet, body shifts, etc.). In the long multi-phased trajectory from horse-drawn plow to airplane, human guidance is made increasingly de-incarnated, dependent more and more on eye interpretation of analogical and digital gauges, and thus progressively dependent on technical or professional training.

Tools foster conviviality to the extent to which they can be easily used, by anybody, as often or as seldom as desired, for the accomplishment of a purpose chosen by the user. The use of such tools by one person does not restrain another from using them equally. They do not require previous certification of the users (p. 22).

Although hand tools much more readily than machines lend themselves to convivial use, "the distinction between convivial and manipulatory tools is independent of the level of technology of the tool" (p. 22). The telephone system, for instance, is an electronic tool for conviviality - indeed, it is an institutional tool for conviviality. But as an originally convivial institution "moves toward its second watershed [it] tends to become highly manipulative" (p. 23), that is, to require specialized knowledge or professional certification, to impose its own "intentions" (as it were), to be useable only at a cost to someone else. As the system for electronic communication moves from telephone to radio to television, access to active usability is replaced by passive consumption and manipulative programming under the direction of professional elites.

Nevertheless, "it is a mistake to believe that all large tools and all centralized production would have to be exclud-

ed from a convivial society" (p. 23). "The criteria of conviviality are to be considered as guidelines to the continuous process by which a society's members define their liberty" (p. 24). There are no purely manipulative or convivial societies. The crucial issue for citizens living within technological society is to consider the balance between convivial and manipulative tools, to admit the existence of the latter, and to strive to foster and protect them. Not only is Illich no preindustrial romantic, he is also no purist.

Although Illich does not make the historical reference, his inspiration derives from the same insight as that of the early 19th century Luddites, and he carries on a running argument with the inadequacies of counter Luddite or socialist commitments. Socialists and Marxists of all varieties ignore "the one issue that counts: careful analysis of the basic structure of tools" (p. 25) and emphasize instead transformations in the structure of ownership. The real issue

is not the juridical ownership of tools, but rather the discovery of the characteristics of some tools which make it impossible for anybody to "own" them. The concept of ownership cannot be applied to a tool that cannot be controlled. The issue ... is what tools can be controlled in the public interest. Certain tools are destructive no matter who owns them, whether it be the Mafia, stockholders, a foreign company, the state, or even a workers' commune (pp. 22-26).

At this point Illich catches his breath and punctuates his argument with a break in the text.

When Illich resumes his discourse, he does so with a four-page analysis of the relation between energy input and the equitable or just distribution and use of tools. In pre-modern or hand tool-dependent societies, "to control more power than others [a person] had to lord it over [others]" (p.

28). Human energy expended in the act of guidance is not only progressively dwarfed by the energy expended through the machine itself, but coordinate with the creation of power tools utilizing non-human sources of energy there is introduced into the social fabric a radical inequality of energy access. The argument of this section, as repeated and elaborated at other points in the text (e.g., in chapter 3, sections 4 and 6), is rephrased as the extended essay, *Energy and Equity*.

There follows a five-page consideration of ancient and modern conceptions of work. A sixth section provides seven pages of examples of convivial reconstruction in medicine, in transportation, and in housing.

Following a second break, a four-page reprise on justice and tools concludes the argument. Illich states, in words reminiscent of John Stuart Mill, that "a just society [is] one in which liberty for one person is constrained only by the demands created by equal liberty for another" (p. 41).⁶ Some tools or arrangements of tools have an inherent tendency to interfere with or to restrict the liberty of choice and action of persons in their midst. It is just as illegitimate to construct or to maintain such tools as it is personally to constrain the choices and actions of another. This theory of justice, which takes personal liberty as its foundational good, when applied to technology demands the principled limitation of "tools that by their very nature prevent such liberty" (p. 41). "The principal source of injustice in our epoch is political approval for the existence of tools that by their very nature restrict to a very few the liberty to use them in an autonomous way" (p. 43).

What is required is especially a criticism of power tools, since these have an inherent tendency toward centralized control and specialization that allows "neither the worker nor most engineers a choice over what use will be made of the energy they manage" (p. 42).

The public ownership of resources and of the means of production, and public control over the market and over net transfers of power, must be complemented by a public determination of the tolerable basic structure of modern tools. This means that politics in a postindustrial society must be mainly concerned with the development of design criteria for tools rather than as now with the choice of production goals (p. 43).

At the same time, the inversion of the politics of tools that would result must be shown to be, not just ideal, but also necessary. Ought implies not only can, but demand. "To translate the theoretical possibility of a postindustrial convivial life style into a political program for new tools, it must be shown that the prevailing fundamental structure of our present tools menaces the survival of mankind" (p. 45). The carrot is to be complemented by the stick.

Chapter 3, "The Multiple Balance," argues the dynamic instability of the industrial or power-tool-dependent society across five distinct dimensions and a sixth dimension of their multiple interrelationships. In response to each of these, Illich seeks to recover three principles of moral, political, and juridical procedure that underlie his critique of tools: the legitimacy of agonistic discussion, the rightful influence of history or tradition, and the primacy of non-professionals "for binding policy decisions" (p. 48).

With regard to the environment, pollution deprives humanity of "the right to the fundamental physical structure" of the biological world (p. 47). Human beings have "evolved to fit into one niche in the universe," and the Earth as their home "is now threatened" (p. 49). This threat points not only toward "the need to limit procreation, consumption, and waste [but equally to the need to] radically reduce our expectations that machines will do our work for us" (pp. 49-50). We must reject "the false expectation that somehow human action can be en-

gineered to fit into the requirements of the world conceived as a technological totality" (p. 50).

Already in the early 1970s, Illich identifies the danger of overemphasizing the issue of ecology. He specifically criticizes Paul Ehrlich (to whom is attributed the only undocumented quotation in the text, a quotation that he immediately makes his own), and Barry Commoner, and raises the problem of what a colleague will later term "the gospel of global efficiency."⁷ Illich, in a deft quotation from Herbert Marcuse regarding "the materialization of values" or the instantiating of values in technical programs, at once points out an essential issue sometimes obscured by new left neo-Marxist jargon and distances himself from that jargon. (To Marcuse's *One-Dimensional Man* Illich accords his second footnote.)

With regard to work, the challenge is what Illich calls "radical monopolies." Radical monopoly results from "the dominance of one type of product rather than one brand" (p. 52), a domination which occurs "when people give up their native ability to do what they can do for themselves and for each other, in exchange for something 'better' that can be done for them only by a major tool" (p. 54). Cars - not just cars made by some one company - radically monopolize urban transit (excluding bicycles, horses, etc.). Schools radically monopolize education (excluding self-education, tutoring, mentoring, apprenticeship, etc.). Physicians radically monopolize medical care (excluding chiropractors, homeopaths, osteopaths, etc. - not to mention self, parents, and children). Neither consumer protection laws nor socialism is an adequate response to radical monopolies.

With regard to education, Illich notes the increasing costs of education but rejects two common rationalizations for this situation: education as a means to some social end (greater productivity), and as an output in itself (post-industrial society theory). Education is increasingly expensive be-

cause the increasing social density of nonconvivial tools necessitates it, and because education using nonconvivial tools is economically unfeasible. The more high-tech the tool, the more its use is dependent on training manual instructions or professional trainers. But even when we learn "how to operate the TV or the telephone...their workings are hidden" from us (p. 59). By contrast, from personal trial-and-error engagement it is possible to learn not only how to use a convivial tool, but how it works. What are today called "user-friendly interfaces" in no way address the disparity Illich identifies. (Illich's remarks on the convivial character of the alphabet and books anticipate points reiterated later in greater detail in *ABC: The Alphabetization of the Popular Mind*.)⁸

Because of the separation of teaching about how to work things from learning about how things work, modern education is incapable of bringing about the kind of radical transformation of behavior required by the present multi-dimensional crisis. Although it is true that "people must learn to live within bounds," this learning "cannot be *taught*" (p. 65). "A new practice ... can only be the result of a new relation between people and their tools" (p. 66).

With regard to politics, there exists an increasing, technologically mediated concentration of power.

As tools get bigger, the number of potential operators declines. There are always fewer operators of cranes than of wheelbarrows...Never before have tools approached present power [and] been so integrated at the service of a small elite (p. 70).

With regard to culture, technical obsolescence and recurring technical change threaten tradition. When artifacts are manufactured by complex, single-product, expensive machines and machine systems, the gradual, incremental wearing out of products (which will be replaced one at a time) cannot

support technical change. What is needed instead is the sudden rejection and replacement of large numbers of artifacts. Obsolescence, whether by advertised fashion, economic redundancy, or technical pressure is a necessary feature of the nonconvivial tool-dependent social order. Culture is transformed from a vehicle of tradition and preservation into a means for enforcing change.

Reviewing the five basic imbalances, Illich maintains that these must not be taken as independent variables. They are intimately interrelated and must be counteracted together. This is indicated by personal frustrations in response to the logic by which persons are regularly constrained to choose ends because they fit tools rather than tools because they fit ends. Given such a situation, one either learns to abstain or goes mad.

To promote the first option, and the re-creation of appropriate or convivial tools, Illich calls for the development of what he terms "counterfoil research" that will "provide guidelines for detecting the incipient stages of murderous logic in tools [and] devise tools and tool systems that optimize the balance of life, thereby maximizing liberty for all" (p. 77). The basic principle is that, "Tools ... have an optimal, a tolerable, and a negative range" of application (p. 78), which need to be clearly identified, through empirical as well as conceptual investigation.

Just as he is neither romantic nor purist, so is Illich no rationalist. The conceptual clarifications of his text are regularly complemented by empirical information and by arguments from experience. The nonacademic character of the text is nowhere more obvious than in the absence of bibliography and references. Illich does not just call for the initiation of counterfoil research, he does it.

Turning again, then, to the carrot, chapter 4, "Recovery," outlines a functioning politics of tools. Tools both extend

and eliminate human capabilities.⁹ A politics of tools depends on public recognition of the elimination possibility, "establishing procedures which permit ordinary people" to exclude "the malignant tool and control the expedient" one (p. 85). The obstacles to such recognition and practice are the idolatry of science, debasements of common language, and loss of respect for traditional processes of social decision making. In initiating a demythologization of science, a recovery of language, and a defense of legal procedure, Illich directly reaffirms three principles that were only indirectly elucidated in chapter 3 - i.e., agonistic discussion, tradition, and non-professional authority.

Scientism and technocracy are based on mistaken ideas about knowledge and information as realities independent of human interpretation. The corruption of language likewise turns human actions into substances to be possessed. "To work" and "to learn" become "jobs" and "education"; actions that were part of living become things to have. By virtue of both scientism and the corruption of language

Limiting tools for the sake of freedom and conviviality is ... an issue that cannot be raised. ... To recommend limits on tools sounds as deeply obscene today as the recommendation for greater sexual frankness and freedom as a condition for a good marriage law would have sounded a generation ago (p. 91).

Promotion of an authentic politics of tools depends on the use of language as "a second-order tool" to clarify issues (p. 91) and law "as a tool for the inversion of society" (p. 93).

Formal adversary procedure is the paradigmatic tool for citizens to oppose the threat of industry to their basic liberties. ... Like ordinary English, formal process is a convivial tool (p. 97).

Before it became common practice among the anti-nuclear and environmental movements, Illich was advocating the activist utilization of legal procedure to protest and alter the course of technological change.

Finally, in chapter 5, "Political Inversion," Illich returns again to necessities. The political inversion that constitutes a true politics of tools will rest on a new consensus growing out of a convergence of "enlightened self-interest," not "shared ideologies" (p. 102). The formation of such a new majority can be stimulated by crisis situations. A crisis has "the potential of turning public imagination inside out" (p. 103). "That people would accept multiple limits to growth without catastrophe seems highly improbable" (p. 105). But "the transformation of catastrophe into crisis depends on the confidence an emerging group of clear-thinking and feeling people can inspire in their peers" (p. 106).

The only response to this crisis is a full recognition of its depth and an acceptance of inevitable self-limitation. The more varied the perspectives from which this insight is shared by interest groups and the more disparate the interest that may be protected only by a reduction of power within society, the greater the probability that the inevitable will be recognized as such (p. 107).

In the end, political inversion will come about not just on the basis of an attractive ideal but because of a kick from history. Yet for the kick to bring about anything more than meaningless pain, there must be insight into old needs and new possibilities.

The argument of *Tools for Conviviality* can thus be summarized as follows:

Chapter 1 Modern tools exhibit two levels of utilization; initially subordinate to human ends, they eventually take on a self-serving character.

Chapter 2 The inner structure of modern tools that grounds the second level of utilization is, first, the mechanical adaptation of non-human sources of energy and, second, the creation of coordinate technical means.

Chapter 3 At the second level of utilization there emerge at least five distinct imbalances in environment, work, meaning, freedom, and culture.

Chapter 4 Recovery of balances across these five dimensions and their interrelations requires the development of a politics of tools based on demythologized science, non-technical language, and legal procedures.

Chapter 5 This inversion of politics can be fully realized only if catastrophe turns to crisis through insight.

2. INSIGHT

Against the background of this interpretive overview of the argument, it is appropriate to venture a thematic appreciation of the text. Such a thematic appreciation can also provide a basis for considering further relations to the Illich corpus and to larger traditions of philosophical reflection on technology.

Tools for Conviviality grows out of a recognition of the fundamental importance of insight. This insight into insight (as it were) is the formal foundation of the work, with both theoretical and practical implications. For the owl of Minerva, to look back over an epoch and discern its structure is coordinate with soaring above or transcending that past. Insight brings with it detachment, through the moment of understanding. But for the cock of Athena, to become enlightened about alternatives of the future is also a spur to action and engagement, an entering into or seizing upon the opportunities of history.

On numerous occasions in the text, Illich alludes to the enlightenment that will lead to practice:

The crisis can be solved only if we *learn* to invert the present deep structure of tools... (p. 10, italics added).

This world-wide crisis of world-wide institutions can lead to a new *consciousness* about the nature of tools ... (p. 12, italics added).

The circle can be broken only by a widely shared *insight* (p. 19, italics added).

It is now time to correct this mistake and shake-off the *illusion* . . . (p. 20, italics added).

The only solution ... is the shared *insight* ... (p. 50, italics added).

[The] political choice of a frugal society remains a pious dream unless [it is possible] to define concrete procedures by which more people are *enlightened* about the nature of our present crisis ... (p. 101, italics added).

We still have a chance to *understand* the causes of the coming crisis, and to prepare for it (pp. 104-105, italics added).

Public, counterfoil research can significantly help ... individuals become more cohesive and *self-conscious* ... (p. 105, italics added, in a section entitled "Insight into Crisis").

The only response to this crisis is a full *recognition* of its depth ... (p. 107, italics added).

Notice that such remarks cluster in the opening and concluding chapters of the text.

This insight that shared insight or awareness leads to human and social transformation naturally calls to mind the title of Illich's first book, *Celebration of Awareness* (1970).¹⁰

A brief aside on *Celebration of Awareness* can thus enhance an understanding of the relation between *Tools for Conviviality* and Illich's work as a whole.

Celebration of Awareness is a collection of twelve occasional pieces, four not previously published. The first two grew out of, or were in response to, the Vietnam War. The next five and largest set of essays are concerned with the Catholic Church, especially as related to Puerto Ricans, the place of the Church in Latin America, and ecclesiastical structure. Indeed, the central and longest essay - which is almost twice as long as any other in the book - is entitled "The Vanishing Clergyman." The next two sets of essays are concerned with schools, then with development and the impact of technological change. The final essay is a plea for cultural revolution through awareness.

The two essays on education will be expanded into Illich's first monograph, *Deschooling Society*. The two essays on development constitute the seed of the present text, *Tools for Conviviality*.

Illich's appeal in *Tools for Conviviality* is not only for a new philosophical analysis of tools, but also - as he develops with passion in his final chapter - for an "inversion" of the politics of tools. "Inversion," the interchange of position or order, is closely related to "conversion," *metanoia*, literally "after-thought," figuratively repentance. The idea that true social transformation is dependent on personal interior reassessment is a thesis that can be found in the Western philosophical and theological tradition at least since Plato and the Hebrew prophets.

Nevertheless, recognition of the importance of insight is not sufficient in itself to ground insight or activate its transformative potential. Insight about insight is not enough. There must be insight concerning something. Illich's substantive insight is that tools have consequences, that technological arti-

facts have inherent characteristics which can influence use, the behavior of the user, and the society in which use takes place. This is Illich's special contribution to greater awareness or enlightenment concerning the modern technological condition in which humanity finds itself. It is also one which is explicitly rejected by the common ideology of the neutrality of tools or technology. Indeed, one way of reading *Tools for Conviviality* is as a sustained critique of the neutrality of technology.

There are, of course, anticipations of this idea in the Western intellectual tradition long before Illich. Not to mention more remote instances, there is the complex cultural response to the Industrial Revolution. To the societal problems associated with the rise of modern technology - that is, of industrial tools and artifacts - there are basically two possible responses. One is to argue that the problems are *not* caused by material objects, but by the social context in which these objects exist. The second is to argue that in reality the problem is the objects. The first can be called the socialist response, the second the Luddite - or, more fairly, the artifactist - response.

An aside on terminology. The practical proposals of socialism are based on more theoretical studies from sociology. If, to avoid arguing *ad hominem*, it is preferable to use "socialist" and "socialism" in place of "Marxist" and "Marxism," then some less personal term should be found for that position commonly referred to with the words "Luddite" or "Luddism." For theoretical studies upon which Luddite practice could be based, one possible candidate is the term "mechanology," used by Jacques Lafitte and Gilbert Simondon to refer to a phenomenology of machines, taking machines as a generic term that includes tools.¹¹ But the Lafitte-Simondon theoretical project confines itself to the inner evolution of mechanical development and fails to address issues dealing with the external implications of the inner alternative structures of

artifacts. Moreover, insofar as theoretical study leads to political program, the terms "mechanist" and "mechanism" would have exactly the wrong connotations. What the anti-socialist (*not* anti-technologist!) school promotes is a phenomenology of artifacts or artifactology, on the basis of which can be formulated a political program that can be termed artifactism.

The tradition of artifactology or artifactist thought prior to Illich includes, besides Lafitte and Simondon, at least the following eclectic melange:

Jacques Ellul's presentation (1954) of a "characterology of technique" as exhibiting automatism of technical choice, self-development, unity (or indivisibility), the linking together of techniques, technical universalism, and technical autonomy.¹²

Gunther Anders's argument (1961) that artifacts can have maxims, so that the Kantian categorical imperative must be extended to read: "Have and use only those *things*, the inherent maxims of which could become your own maxims and thus the maxims of a general law."¹³

Lewis Mumford's distinction between authoritarian and democratic technics (1964).¹⁴

Marshall McLuhan's thesis (1964) that independent of content, a particular communications medium is its own message.¹⁵

Jean Baudrillard's description (1968) of the postmodern "system of objects" as constituting a linguistic-like phenomenon liberated from economies of production.¹⁶

Herbert A. Simon's project, "sciences of the artificial" (1969).¹⁷

Richard Weaver's analysis of machines as constituting, as is said of military forces prior to utilization, their own "forces in being" or influence (1970).¹⁸

It is crucial to note - as references to Lafitte and Simondon should already indicate, and the inclusion of Baudrillard and Simon here can reinforce - that artifactist thought is in no way inherently anti-technology. As an artifactology, it simply subscribes to the thesis that artifacts have consequences; there is room for considerable disagreement about the character of those consequences, and whether they are to be promoted or restricted.

In none of the cases listed, however, do the authors provide extended or detailed analysis of the inner structures of artifacts and the ways such structures give to artifacts inherent tendencies toward specific kinds of human engagement and use. Their focus remains largely at some macro and in one sense symbolic level, stressing external relations.

Although Ellul makes some observations about the personal and societal effects of machines *qua* machines - and is commonly misconstrued as opposed to the artificiality *qua* artificiality of artifacts¹⁹ - his central interest is technical action. As a result, his characterology applies more to technology and tools as social institutions than to tools as material objects. Anders and McLuhan limit themselves to considerations of particular kinds of artifacts - nuclear weapons and communications technologies, respectively. McLuhan, as well, increasingly clothes analysis in an oracular rhetoric,²⁰ as does Baudrillard, for whom it is the unexplicated objectlessness of distinctively contemporary artifacts that turns them into signs. Simon's interest is as much in providing a meta scientific analysis of the unities present in such positive sciences of artificial phenomena as organization theory, management science, and behavioral psychology as it is in artifacts or artificiality.²¹ Weaver's ideas are at most a suggestive analogy about

the general ability of any collection of artifacts to influence individual decision and social behavior.

Mumford, it is true, especially in earlier work, provides a broad perspective on artifice - one that takes note of differences between machines and tools as well as of the distinctive identities exhibited by clothes, containers, structures, apparatus, utensils, and utilities. One perceptive observation concerns how "in the series of objects from utensils to utilities there is the same relation between the workman and the process that one notes in the series between tools and automatic machines: differences in the degree of specialization, the degree of impersonality."²² But on the whole Mumford's arguments remain somewhat impressionistic, and as much analogic as analytic. It is also true that even when, as with the case of the mechanical clock, Mumford analyzes the influence of machines on human affairs, he does not relate this influence to the structurally distinct properties of the artifacts themselves.

Illich's analysis, by contrast, puts forth an analysis of the inner structures of tools with concrete implications for the explanation of distinctive human-artifact engagements that can be summarized in the following table.

	Immediate source of energy (matter)	Immediate source of guidance (form)
Hand tools	Human beings	Human beings
Power tools	Non-human realities	Human beings

Although Illich fails to make what might have been a useful reference to Mumford's broader spectrum of distinctions, he nevertheless provides a pointed analysis of the inner character of two types of tools and the ways these differential inner structures constrain human engagements, independent of particular intentions, good or bad. For Illich, tools embody

or express not only the intentions of individual human makers and users, but also, and equally significantly, they embody what may perhaps perversely be termed "unintended intentions" - which, for that very reason, must be investigated. There is the need for a phenomenology of the artificial related to but not limited by concerns for the effective manipulation and management of artifacts.

As operating or functional entities, tools can be analyzed into material and formal elements. Energy constitutes a kind of prime matter of motion, providing the raw or unformed impulse for operating; while guidance, operating of course through the tool itself, gives the functioning of any tool a formal definition.²³ Because of dependence on human users for both the material and formal elements of their functioning, hand tools exhibit a unique dependency on and qualitatively distinct engagement with human beings. Insofar as the energy to operate power tools becomes independent of human users, such tools begin to exhibit a certain autonomy of any individual user. Moreover, because power tools concentrate increasingly greater quanta of energy in the hands of users, they necessarily introduce into the social order inequalities that would otherwise not be present.

This sketch of a contribution to the phenomenology of artifacts begins to reveal a straightforward sense in which technology can become autonomous in relation to human users (if not makers), and how a tool can have inherent characteristics that ground distinctive impacts on societal orders - independent of particular social contexts within which it might be embedded or particular social process with which it may be associated. It is also relatively simple to see the meaning of Illich's repeated call for new kinds of engagement tools for human beings to work with (tools employing human energy and guidance) instead of more tools to work for humans (tools requiring less and less direct human energy or guid-

ance). The latter increasingly disallow end-users to introduce their personal intentions into the world, to leave behind traces of themselves in ways that have created the rich worlds of traditional artifice which have, in the past, served as dwelling places of humanity. Users now become consumers, and leave behind traces of themselves only in their wastes.

Moreover, with hand tools, the general bodily engagement and the dependency on human energy provide the basis for direct, intuitive, judgments about the efficacy of a particular tool in a particular context. If a hand tool does not work, the user knows it, immediately and through direct experience. To swing a dull axe, and feel in the hands and arms the throw-back of momentum that fails to be inserted into the grain of the wood, hearing at the same time a thud rather than a sharp crack, provides all the evidence the woodsman needs that a blade requires file and whetstone. As tools are transformed into machines and become vehicles for the utilization of energy originating outside the human body, the user is reduced to operator or manipulator, and the human being is deprived of many of the direct or immediate indicators of efficacy. To compensate, to provide a new basis for judgment, human users develop a science of mechanics, with its quantified measures and gauges of efficiency. The quantification of efficacy by the input-output calculus of efficiency in turn gives birth to new constructions of artifice, the world of machines.

This analysis goes beyond Illich's own work, which remains no more than the suggestive initiation of a comprehensive phenomenology of artifacts and their human engagements. But, drawing on the mechanological analyses of Lafitte and Simondon, and setting aside the need to address issues of the influence of what may be called the phenomenology of passive artifacts, one can summarize, in the following schema, a provisional extension of Illich's thought.

	Immediate source of energy (matter)	Immediate source of guidance (form)
Tools	Individual human beings	Individual human beings
Premodern machines	Groups of human beings or animals or inanimate nature (wind and water)	Individual human beings
Modern machines	Technologically controlled nature (steam)	Individual human beings and mechanical controls (commanded by other human beings)
Cybernetic devices	Technologically control- led and abstracted nature (electricity)	Electronic controls

Illich's hand tool-power tool distinction simplifies a conceptual gradient from tools properly so-called to cybernetic devices. Machines are first of all hand-employed tools; then tools that require energy input from gangs of laborers (as with galley slaves rowing a ship) or animals (a team of oxen pulling a mold board plow) or the readily accessible motions of nature (wind caught by the sail). External input undergoes further transmutation with the development of, first, the heat engine, then electricity, to drive a mechanical prime mover. The power of the steam engine almost exponentially exceeds any previous energy source; electricity takes such powers into similar realms of scientific and conceptual abstraction.

Transmutations in guidance and formal functioning follow suit. Note, for instance, how along with the harnessing of power from the heat engine there developed internal technical requirements for technological controls; these were initially realized in the mechanical governor, introducing a formal decoupling of human operators from actual machine

operation. Such formal decoupling at the level of operation is, however, coordinate both with the emergence of the engineering analysis of mathematicized control - and with an expanded external coupling through the consumption of mass-produced products. At the same time, it may well be that electrical and electronic power tools such as kitchen appliances and personal computers reintroduce a degree of individualized control that was not possible with large-scale, steam-powered industrial machines.

Against such a background one can begin to identify certain necessary refinements in Illich's program, as well as trajectories for future research, and some weaknesses.

First, Illich's statement that "the distinction between convivial and manipulatory tools is independent of the level of technology of the tool" (p. 22) calls for clarification. Surely the larger implication of his analysis is that this is not the case; traditional tools are inherently more convivial than modem machines, which are technologically more advanced.

Second, there are strong grounds for questioning Illich's broad conception of a tool as covering simple and complex physical artifacts and social institutions, first-order and second-order tools. This is an idea that Illich shares, remarkably enough, with the American Pragmatists. John Dewey, for instance, argues that all human activities - whether the making and using of artifacts, the forming of social institutions, or even rational inquiry - constitute kinds of tools.²⁴ Human activity engaged with anything in any way is instrumental for the achievement of some human value. The difficulty with such an approach is that it obscures the need for different kinds of analyses when dealing with material objects and social institutions, not to mention thinking and methods of inquiry - each of which becomes convivial or nonconvivial in quite distinctive ways. With social institutions, for instance, it is quantity of individual interactions and bureaucratic line

and staff structures that are central, not quanta of energy input and technical control mechanisms.

Finally, granted a distinction between material artifacts and social institutions, the unique interest Illich shares with Anders comes more clearly into view. A number of philosophers - most notably, Hans Jonas have raised and reflected on the impact of technology on ethics and the need to expand ethical concepts to take account of choices and actions made possible and prevalent by modern technology.²⁵ Yet in most cases the focus has remained, as in traditional ethics, on human action, however technologically influenced or modified. With Anders and Illich the focus goes beyond human action to consider the inner character of tools and technology in relation to fundamental ethical principles - deontological and utilitarian, respectively.

Illich's insight in this area nevertheless remains paradoxical if not problematic. Although the paradox cannot be explored here in any depth, the following may fairly be noted. There is a gap between Mill's formulation of a principle for limiting political action on others and Illich's attempt to adapt that principle to limiting the construction of tools which influence the lives of self and others. To some extent the problems are inherent in Mill's own theory of liberty. A negative principle against X actions or constructions is not the same as a positive principle for non-X actions and constructions. Although No S is P is equivalent to S is non-P by obversion, the logic of imperatives does not allow a move from Do not do X to Do non-X. Furthermore, the connection between Mill's ideal of diversity in individual human development may be at most contingently connected with his principle prohibiting harm or interference with others, except for self-protection. Indeed, if human beings by nature live in community, then the protection of communities may well take priority over individual liberty as the only way to support profound diver-

sity. Illich also fails to give any serious consideration to the way Mill's principle has become itself an ideological support for that advanced and advancing technological individualism which is only an appearance of diversity.²⁶

The essential insight of *Tools for Conviviality* remains that tools, as material objects, matter. It is not just intentions that count; it is also tools - not wholly independent of, but at least as an independent variable with end-user intentions. Different types of tools influence in morally and politically significant respects what end-users can and cannot do, and how they can and cannot do it. The social process of making and using tools reflects the tools used in the making and using as well as social contexts and processes. Indeed, the structure of the tools may well be the more fundamental issue. This constitutes (as it were) an inversion of and challenge to received wisdom regarding relations between material entities and human intentions. In the popular wisdom, entities do not matter, intention does. "Technology is neutral." "Guns don't kill people, people do." Illich, like everyone else, grants that intentions matter, but not in ways that provide comfort for the status quo regarding technological objects. Indeed, Illich's intention is to promote precisely the insight that will alter not just accidental uses (which remain contingently dependent on good will, and in many instances are opposed and resistant to the inner structures and implications of artifacts) but the things themselves - and, thereby, essential use.

3. INFLUENCE

The influence of *Tools for Conviviality* is - given Illich's carefully crafted argument and the significance of its insights - exceptionally limited. The book has been largely overlooked by philosophers of technology who share Illich's fundamental concern. Its only serious impact has been in discussions surrounding the idea of alternative technology.

The issue here is not the influence of Illich's work in general, nor the general intellectual and cultural appreciation of *Tools for Conviviality*. The issue is the influence of this one text in the field of philosophy.

Yet as background to this restricted concern, consider first some more general observations. According to *Dissertation Abstracts* there have been, up through 1988, twenty-five dissertations on the work of Illich.²⁷ Of these twenty-five dissertations, sixteen have been in the area of education, only one in philosophy. Others are scattered about in such fields as sociology (three instances), mass communications, urban planning, theology, anthropology, and social work. This is a reasonably accurate indication of the relative weights given to the various aspects of Illich's work by the scholarly academic community, at least in the United States.

In Illich's citation indices for the social sciences and for the arts and humanities, a similar range occurs. The books most often cited are *Deschooling Society* and, to almost as great an extent, *Medical Nemesis*. Indeed, it is surprising that, given the number of citations of *Medical Nemesis*, there have been no dissertations on that work. (Perhaps the explanation is just that graduate education in the medical community does not produce dissertations, while graduate study in education does.)

Following this summary measure of the general influence of Illich's work, consider the specific area of philosophy. In the United States and in the English-speaking world generally, *The Philosopher's Index* is the best single bibliographic reference. Up through 1973 *The Philosopher's Index* contains no references to any work by or about Illich. In 1974 there is one citation of an article on *Deschooling Society*.²⁸ In 1975 there are three citations of articles on *Deschooling Society*.²⁹ In 1976 there is a reference to one article replying to a 1975 citation.³⁰ The first five citations of articles on Illich in *The*

Philosopher's Index from 1974 to 1976 are all to *Deschooling Society*.

Between 1974 and 1976 the only article by Illich in *The Philosopher's Index* is one on medicine.³¹ There is also one citation of a review of *Medical Nemesis* in 1976.³² In 1977 an article appears discussing a thesis which becomes part of *Medical Nemesis*.³³ During 1978 and 1979 Illich falls completely out of *The Philosopher's Index*- no articles about, by, or reviews of - to reappear with three more articles on *Deschooling Society* in 1980,³⁴ one in 1981,³⁵ two in 1982.³⁶ In 1981 there are two citations of articles by Illich in a Belgian philosophy journal,³⁷ but there are no other articles by or reviews of Illich books during these three years. From 1983 to 1989 there are no articles on nor reviews of Illich's work, although *Medical Nemesis* is cited as a book in 1985 and a contribution to an edited collection is listed in 1986.³⁸ The discussion of Illich in the professional philosophical literature focuses almost exclusively on *Deschooling Society*, and peaks in the mid-1970s. The first and so far only article in English to undertake a philosophical discussion of *Tools for Conviviality* is one by Anthony Weston which does not appear until late 1989.³⁹

That the philosophical literature has not been avoiding issues Illich seeks to address in *Tools for Conviviality* can be shown by noting that from 1985 to 1989 *The Philosopher's Index* cites more than fifty articles per year on technology. In 1989, for instance, there are references to eighty-four articles on technology. The dearth of philosophical literature on Illich also cannot be explained as a function of his failure to publish in philosophical journals or to teach in a university philosophy department. Neither Jacques Ellul nor Herbert Marcuse fulfilled such criteria, yet their work is widely criticized and considered philosophical. It is simply the case that in the English-speaking philosophical literature on technology Illich's work is singularly overlooked and ignored.

The *Repertoire bibliographique de la philosophie* is the major international index to philosophical literature in European languages. Again, through 1975 there are no articles about or by Illich. In 1976 the first articles appear: one on, another by Illich.⁴⁰ The 1977 edition cites one article⁴¹ and three books.⁴² The 1977 *Repertoire bibliographique* also cites the Spanish and Italian translations of *Tools of Conviviality* and the Spanish edition of *Energy and Equity*.

This indicates a recognition of philosophical importance that Illich has not been accorded by *The Philosopher's Index*. Indeed, from 1977 Illich's books and the translations of his books, articles by and about, and reviews appear regularly in the *Repertoire bibliographique*. In the European philosophical community, once Illich is recognized as a philosophical author, this recognition is sustained from the late 1970s onward. It is also the case, however, that *Tools for Conviviality* fails to occupy a place of prominence in this recognition, which focuses much more attention on Medical Nemesis.⁴³

Despite these oversights it is perhaps appropriate to note that bibliography in the special field of philosophy and technology studies has, from an early period, recognized the relevance of Illich's work⁴⁴ - although this has done nothing to promote its philosophical consideration.

As already suggested, the only body of literature that has accorded *Tools for Conviviality* any substantial attention is that associated with the alternative technology movement. The widely used collection of readings, *Stepping Stones: Appropriate Technology and Beyond* (1978),⁴⁵ includes a selection from *Tools for Conviviality*. In the late 1970s Valentina Borremans, an associate of Illich at CIDOC, edited a 112-page *Guide to Convivial Tools*.⁴⁶ Interestingly enough, Borremans includes as relevant references to all of Illich's books to that point. In 1982 Malcom Hollick's "The Appropriate Technology Movement and Its Literature: A Retrospective" also gives

Tools for Conviviality prominent consideration.⁴⁷

The real influence of this text has been not in the philosophical literature, but - appropriately enough - among a small circle of friends, *con-vivo*. The disappointing paradox of this influence is that it has not promoted a continuation and deepening of the analysis of the inner structure of tools, either in later work by Illich or in that of his colleagues.

Indeed, *Shadow Work*, a collection of five essays, carries on a running critique of certain aspects of the alternative technology movement without ever advancing the critique of tools.⁴⁸ *Gender* has a section, "Gender and Tools," which provides historical data on the break between artifacts and gender that is part of the modern way with tools, but it gives no phenomenological description of this break or grounding for its occurrence.⁴⁹ *ABC* does an analysis of the cultural impact of that tool known as writing, but not in such a way as to deepen principles developed in *Tools for Conviviality*. Indeed, the trajectory of Illich's thought moves away from concern for the inner character of tools and toward an emphasis on their external relations - specifically their impact, not on social institutions and relationships, so much as on self-understandings and self-images.

There exists, however, a tradition of artifactist thought after *Tools for Conviviality* (1973), which includes at least the following:

Langdon Winner, *Autonomous Technology: Technics-Out-of-Control as a Theme in Political Thought* (1977) and *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (1986).⁵⁰

Don Ihde, *Technics and Praxis* (1979) and *Existential Technics* (1983).⁵¹

Mihaly Csikszentmihalyi and Eugene Rochberg-Halton, *The*

Meaning of Things: Domestic Symbols and the Self (1981).⁵²

Albert Borgmann, *Technology and the Character of Contemporary Life: A Philosophical Inquiry* (1984).⁵³

What is disappointing is that in none of these books has any serious use been made of the work of Illich.

Consider Langdon Winner. His initial book, *Autonomous Technology*, published in 1977, four years after *Tools for Conviviality*, accords Illich only the most casual mention.⁵⁴ *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* is an extended defense and elaboration of a thesis found most fully articulated in Ellul's *The Technological Society* - the idea that the rise of modern technology is coordinate with the creation of a new form of political life, which Winner calls "technological politics." Although his overlooking of Illich might be explained as a result of Winner's focus on analyzing the technological politics characteristic of what Ellul terms the technical milieu, Illich's description of politics after the second watershed in technical development corresponds precisely to these two other descriptors. Illich's further analysis of the specific autonomies of certain kinds of tools and the concrete implications that flow from their inner structures, not to mention his conception of justice and the politics of inversion, open further complementary avenues for analysis. Moreover, the same year that Winner's work appeared also witnessed the publication of Ellul's *The Technological System*, an extended revision and commentary on the first two chapters of *The Technological Society*. Unlike Winner, Ellul does give Illich considerable attention, quoting him at length on four different occasions.⁵⁵

The common ground between Winner and Illich is noted by Anthony Weston in the sole philosophical analysis of *Tools for Conviviality* yet to appear in English, already mentioned. Weston identifies three ways that Illich's fundamental

criteria of conviviality apply to tools. For Illich, a tool is convivial if it

- (1) can be freely chosen,
- (2) is an active expression of personal life, and
- (3) is not monopolized by some professional elite.

Winner, in the last chapter of his book, introduces without much argument three guidelines that might be incorporated into an "epistemological Luddism" for questioning and reintroducing into technological politics some of the character of traditional political life. These would examine technologies in terms of their

- (a) intelligibility to non-experts,
- (b) degrees of flexibility, and
- (c) tendency to foster dependency.⁵⁶

As Weston observes, Winner's (a) corresponds to Illich's (3), Winner's (b) to Illich's (1), and Winner's (c) to Illich's (2).⁵⁷

The difference between Winner and Illich is that Winner is primarily analyzing that literature which focuses the problem of autonomous technology for political reflection and only secondarily the problem of technology itself; on the other hand, Illich, like Ellul, is dealing in the first place with the problem of technology.

Winner's second book, *The Whale and the Reactor*, is not significantly different in this regard. It mentions Illich, but only twice and in passing.⁵⁸ "Do Artifacts Have Politics?," the central chapter of the first and controlling section of the book, could have been deepened and strengthened by an engagement with the central argument of *Tools for Conviviality*. Originally published in 1980, "Do Artifacts Have Politics?" considers two ways in which artifacts can embody political implications. In the first, human beings specifically make technologies solve political problems. He cites the examples of Robert Moses's Long Island parkway overpasses, which

were designed to restrict use by buses and thus access by the poorer classes of the city; Cyrus McCormick's molding machines, utilized to break shop floor labor organization; and the mechanical tomato harvester, which turned truck farming into agribusiness.

The things we call "technologies" are ways of building order in our world. ... Consciously or unconsciously, deliberately or inadvertently, societies choose structures for technologies that influence how people are going to work, communicate, travel, consume, and so forth over a very long time. In the processes by which structuring decisions are made, different people are situated differently and possess unequal degrees of power as well as unequal levels of awareness...For that reason the same careful attention one would give to the rules, roles, and relationships of politics must also be given to such things as the building of highways, the creation of television networks, and the tailoring of seemingly insignificant features of new machines.⁵⁹

In comparison with Illich's argument and its urgency, this simple call for more carefulness in tool making and using sounds like a weak platitude.

In the second case, there are technologies which, independent of any human intention, embody certain inherent political implications. Here Winner cites the arguments of Engels, Plato, and Marx (in that order) and then distinguishes strong and weak versions of this thesis. In the strong version, a certain technology is said to require or necessitate some specific social relations. In the weak version, a technology is argued not to require but to be strongly compatible with specific social relations. "My belief that we ought to attend more closely to technical objects themselves is not to say that we can ignore the contexts in which those objects are situated."⁶⁰

But in neither version does Winner analyze the inner structure of modem tools. In comparison with Illich, his analysis remains oriented toward theoretical discussion and external relations.

Consider also Don Ihde. Neither *Technics and Praxis* nor *Existential Technics* makes any reference to Illich. On the one hand, this is more understandable than with Winner; Ihde analyzes not so much discussions about the politics of tools as tools in scientific research and, to some moderate extent, leisure. On the other hand, Illich himself also provides insights into the phenomenology of human-technology interactions that complement Ihde's work. Ihde's work, like Illich's, is focused more on the using of tools than on their making; but unlike Illich, Ihde is concerned primarily with scientific instrumentation or the cognitive use of tools to the exclusion of more quotidian engagements such as education, transportation, and medicine.

Technics and Praxis, for instance, considers in detail the ways in which tools or instruments can extend human capability (compare *Tools for Conviviality*, pp. 84-85) and, in the process, also restrict access to the world (a point Illich does not develop) through a simultaneous amplification-reduction structure. Ihde uses the example of a dentist's probe which, as a small metal rod with a pointed tip, is able to detect irregularities in a tooth that a finger would not be able to sense.

But at the same time that the probe extends and amplifies, it *reduces* another dimension of the tooth experience. With my finger I sensed the warmth of the tooth, its wetness, etc., aspects which I did not get through the probe at all. The probe, precisely in giving me a finer discrimination related to the micro-features, "forgot" or reduced the full range of other features sensed with my finger's touch.⁶¹

The probe embodies or extends finger or hand. But instruments not only enter into what Ihde thereby terms embodiment relations; they also take on hermeneutic relations. In the relation

Human → Instrument → World

the instrument can be assimilated to a human-instrument combination so that the user and instrument together confront or interpret the world thus:

[Human-Instrument] → World.

But human users can also place themselves over against the instrument, now viewed as part of the world, and thus enter into a hermeneutic or interpretative relationship directly with the instrument-world:

Human → [Instrument-World].

Eyeglasses are engaged in embodiment relations, electron microscopes in hermeneutic relations.

Ihde's consideration of how concrete things such as dental probes, telephones, magnifying glasses, microscopes, electron microscopes, telescopes, electronic music instruments, or computers exhibit such relationships can be correlated with Illich's concerns for the ways power amplification entails freedom reduction. The move in *Existential Technics* toward consideration of how technical engagements influence human self-understandings can be correlated as well with emphases more prominent in Illich's later work.

Ihde, however, simply analyzes the differences between these two human experiences of instruments without explaining their ground in different kinds of tools. But clearly

what Illich identifies as the difference between hand tools and power tools begins to provide this explanation. Hand tools are more amenable to embodiment relations, whereas power tools tend to require hermeneutic relations.

Like the later Illich and the Ihde of *Existential Technics*, Mihaly Csikszentmihalyi and Eugene Rochberg-Halton are concerned with the relation between things and self-understandings. In their words,

Men and women make order in their selves...by first creating and then interacting with the material world. The nature of that transaction will determine, to a great extent, the kind of person that emerges. Thus the things that surround us are inseparable from who we are. The material objects we use are not just tools we can pick up and discard at our convenience; they constitute the framework of experience that gives order to our otherwise shapeless selves.⁶²

Their focus, however, is on household things and their symbolic import. It is nevertheless remarkable that in a comprehensive survey of previous approaches to an understanding of things that considers psychological, anthropological, and sociological studies there is no mention of the approach represented by Illich (or Ihde, for that matter).

At the same time, by raising the question of the symbolic import of things, Csikszentmihalyi and Rochberg-Halton re-present the challenge of immaterialism associated perhaps most often with Baudrillard. This challenge concerns the relation between the inner structure, the functional, and the symbolic characters of artifacts, and is crucial to Illich's argument for self-learned self-limitation in the making and using of technology. Any attempt to focus ethical-political reflection on material artifacts - especially one arguing for the experiential learning of self limitations - must address the coun-

terthesis of Baudrillard and others regarding the immaterial, sign character of contemporary objects. For Baudrillard, for instance, "*There are no limits to consumption*"⁶³ because modern things are more like words than physical objects. Just as conversation is inherently limitless, so is modern consumption.

[W]e want to consume more and more. [Read: "We want to talk more and more."] This compulsion to consume [to talk] is not the consequence of some psychological determinant ... nor is it simply the power of emulation. It is a total idealist practice which has no longer anything to do (beyond a certain point) with the satisfaction of needs, nor with the reality principle; it becomes energized in the ... object-signs of consumption... Hence, the desire to "moderate" consumption or to establish a normalizing network of needs is naive and absurd moralism.⁶⁴

Albert Borgmann's explication of contemporary artifacts in terms of what he calls the device paradigm perhaps provides the beginning of an analytic response. Borgmann also, alone among serious philosophers of artifice writing in the wake of *Tools for Conviviality*, grants it a measure of recognition - even while he takes issue with at least one thesis of the text.⁶⁵

Borgmann contrasts traditional things with modern devices.

A thing ... is inseparable from its context, namely, its world, and from our commerce with the thing and its world, namely, engagement. The experience of a thing is always and also a bodily and social engagement with the thing's world.⁶⁶

A device, by contrast, seeks to realize the promise of technology "to bring the forces of nature and culture under control, to liberate us from misery and toil, and to enrich our lives"⁶⁷ in

a material object cut loose from all bodily and social engagement. In contrast with a fireplace, for example, "a central heating plant procures mere warmth and disburdens us of all other elements."⁶⁸ In its very disburdenment, the device takes on a disembodied or immaterialized character, like a word or a sign.

But human beings are not just the users of words and signs; they are embodied beings whose lives are realized through what Borgmann calls focal things and practices. While recognizing, with Baudrillard, the presence and influence of devices, Borgmann nevertheless, like Illich, calls for

*the recognition and restraint of the [device] paradigm. To restrain the paradigm is to restrict it to its proper sphere. Its proper sphere is the background or periphery of focal things and practices. Technology so reformed is no longer the characteristic and dominant way in which we take up with reality; rather it is a way of proceeding that we follow at certain times and up to a point, one that is left behind when we reach the threshold of our focal and final concerns.*⁶⁹

According to Borgmann, such a reform will take place not out of crisis so much as out of focal concern. It is not the stick of necessity so much as the carrot of "the significance of things and the dignity of humans"⁷⁰ that can lead from a nonconvivial to a convivial world. Whether this is as true in the world dominated by power tools as it is in a world of hand tools is perhaps another issue to be addressed by artifactist thought.

Although the direct influence of *Tools for Conviviality* has been limited, still a diversity of collateral thinkers testify to the need for and vitality of its artifactist program, and to the need for common cause across more than one philosophical perspective. Illich's insight may not yet have been accorded explicit acknowledgment as a contribution

to the phenomenology of artifacts, but then the common pursuit of this reflection has taken on none of the features of an old or established discourse. As the phenomenology of artifacts emerges into shared conversation, it may well be that *Tools for Conviviality* will be able to play a role. As argument, it remains young.

Notes

1 Ivan Illich, *Tools for Conviviality* (New York: Harper & Row, 1973). All page references in the text are to this volume.

A full analysis of this book would have to incorporate comparisons with at least three basic translations, which have benefitted from Illich's revisions. With commentaries quoted from hand written notes by the author (dated April 1987) on the title pages in a special collection of the Rare Books Room at the Pattee Library of the Pennsylvania State University, these are:

La convivencialidad (Barcelona: Barra!, 1973). Pp. 148. Translated from English by Matera Padilla de Gossmann, but "totally reviewed by the author if not dictated to Doña Matera." Numerous additions and subtractions. For example, the first two paragraphs of the English introduction are enlarged to three paragraphs in Spanish, while the section on tools and libertarian justice (adapting John Stuart Mill) at the end of chapter two is simply deleted.

La convivialite (Paris: Seuil, 1973). Pp. 160. From the title page of the English edition of *Tools for Conviviality*: "N.B. A posterior, French book, based on this has been totally re-written by me, and has often served as the basis for translations into other languages."

Selbstbegrenzung: Eine politische Kritik der Technik. "Tools for Conviviality." Reinbek bei Hamburg: Rowohlt, 1975. Pp. 190. German by Thomas Lindquist. Copyright references to both English and French versions. "This is the final version of my essay, which goes beyond the French. I wrote it with the assistance of Dr. Gustav Kiinstler, my teacher, mentor and paternal friend, while he was immobilized dying in a Vienna hospital"

2 According to Illich's commentary (see note 1), *Energy and Equity* was "written at the request of Marion Boyars by expanding an article published in *Le Monde*."

3 Examples:

From *Medical Nemesis* (New York: Pantheon, 1976), p. 5: This book "uses a model of social assessment of technological progress that I have spelled out elsewhere [footnote references *Tools for Conviviality*] and applied previously to education [footnote references *Deschooling Society*] and transportation [footnote references *Energy and Equity*], and that I now apply to the criticism of the professional monopoly and of the scientism in health care."

From *Toward a History of Needs* (New York: Pantheon, 1978), p. ix: "The first essay ["Energy and Equity"] is a postscript to my book *Tools for Conviviality* (New York, 1973)."

From *Shadow Work* (Boston: Marion Boyars, 1981), p. 4: "In *Tools for Conviviality*, I called attention to how the environment is ruined for use-value oriented action by economic growth."

Tools for Conviviality is also the only book that has been the basis for the publication of another book by a student of Illich's work. See Valentina Borremans' *Reference Guide to Convivial Tools*, Special Report no. 13 (*Library Journal*, 1980), with a preface by Illich. The *Guide* itself is referenced in *Gender* (New York: Pantheon, 1982), p. 18.

4 *Energy and Equity* (New York: Harper & Row, 1974) will also be published in this series. This will not be the case for any subsequent Illich book.

5 See, e.g., Valerie Mike, "Toward an Ethics of Evidence - and Beyond: Observations

on Technology and Illness," *Research in Philosophy and Technology* 9 (1989): 101-113.

⁶ See John Stuart Mill, *On Liberty* (1859), chapter 1, paragraph 9: "The object of this essay is to assert one very simple principle ... that the sole end for which mankind is warranted, individually or collectively, in interfering with the liberty of action of any of their number, is self-protection."

⁷ Wolfgang Sachs, "The Gospel of Global Efficiency: On Worldwatch and other Reports on the State of the World," privately circulated article, a highly edited version of which appeared as "A Critique of Ecology," *New Perspectives Quarterly* 6, no. 1 (Spring 1989): 16-19.

⁸ Ivan Illich and Barry Sanders, *ABC: The Alphabetization of the Popular Mind* (San Francisco: North Point Press, 1988).

⁹ Ernst Kapp, in *Grundlinien einer Philosophie der Technik* (1877), the first book to develop an explicit philosophy of technology, stressed the former view.

¹⁰ Ivan Illich, *Celebration of Awareness: A Call for Institutional Revolution* (Garden City, N.Y.: Doubleday, 1970).

¹¹ Jacques Lafitte, *Reflexions sur la science des machines* (Paris: Bloud et Gay, 1932; reprinted Paris: J. Vrin, 1972); English translation by John Hart and Jean LeMoine, *Reflections on the Science of Machines* ([London, Ontario, Canada] Mechanology Press, n.d.). Gilbert Simondon, *Du mode d'existence des objets techniques* (Paris: Aubier, 1958; reprinted 1969, 1989). For commentary see Carl Mitcham, "Documentation: Analysis of Machines in the French Intellectual Tradition (Espinass, Lafitte, Weil)," *Research in Philosophy and Technology* 2 (1979): 189-234.

¹² Jacques Ellul, *La Technique ou l'enjeu du siècle* (Paris: Colin, 1954), chapter 2, section 2. English translation by John Wilkinson: *The Technological Society* (New York: Knopf, 1964). See also the two-part update of this seminal text: *Le système technique* (Paris: Calmann-Lévy, 1977), English translation by Joachim Neugroschel, *The Technological System* (New York: Continuum, 1980); and *Le bluff technologique* (Paris: Hachette, 1988); English translation by Geoffrey W. Bromiley, *The Technological Bluff* (Grand Rapids, Mich.: Eerdmans, 1990).

¹³ Gunther Anders, "Commandments in the Atomic Age," in *Burning Conscience* (London: Weidenfeld and Nicolson, 1961), p. 18. Italics added.

¹⁴ Lewis Mumford, "Authoritarian and Democratic Technics," *Technology and Culture* 5, no. 1 (Winter 1964): 1-8.

¹⁵ Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1964), especially chapter 1, "Medium Is the Message."

¹⁶ Jean Baudrillard, *Le système des objets* (Paris: Gallimard, 1968).

¹⁷ Herbert A. Simon, *The Sciences of the Artificial* (Cambridge, Mass.: MIT Press, 1969; second, expanded edition, 1981).

¹⁸ Richard Weaver, "Humanism in an Age of Science," ed. Robert Hamlin, *Intercollegiate Review* 7, nos. 1-2 (Fall 1970): 15. (Both Anders and Weaver are reprinted in C. Mitcham and R. Mackey, eds., *Philosophy and Technology*, New York: Free Press, 1972, 1983, pp. 130-135 and 136-142, respectively.)

¹⁹ For an appraisal of the necessity and benefit of artifice, see Jacques Ellul, "Technique and the Opening Chapters of Genesis," in Carl Mitcham and Jim Grote, eds., *Technology and Technology* (Lanham, Md: University Press of America, 1984), pp. 123-138.

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- 20 See, e.g., Marshall McLuhan and Quentin Fiore, with Jerome Agel, *The Medium Is the Massage* (New York: Bantam, 1967).
- 21 See Mario Bunge's *Scientific Research* (New York: Springer, 1967), vol. 2: *The Search for Truth*, Part 3, chapter 11, "Action," for a distinction between substantive and operative applications of science, with the latter constituting scientific studies of machines and human-machine interactions which is another way of describing Simon's interest.
- 22 Lewis Mumford, *Technics and Civilization* (New York: Harcourt, Brace & World, 1963; first published 1934), p. 11.
- 23 Extending this analysis, which obviously adapts terms from Aristotelian metaphysics, one could describe the tool as signate matter. Then one could also say that the more technologically advanced the tool, the more signate its matter; and thus the more determined its motion.
- 24 See, e.g., the discussion in Larry A. Hickman's *John Dewey's Pragmatic Technology* (Bloomington: Indiana University Press, 1990).
- 25 See especially Hans Jonas, *The Imperative of Responsibility: In Search of an Ethics for the Technological Age*, trans. Hans Jonas and David Herr (Chicago: University of Chicago Press, 1984).
- 26 See Robert Paul Wolff, Barrington Moore, Jr., and Herbert Marcuse, *A Critique of Pure Tolerance* (Boston: Beacon, 1965; 2d edition, 1969), for a critical response to Mill's principle.
- 21 The dissertations in question:
- (1) Barbara Welch, "Being-in-the-Body: A Reflection upon American Self Medication Drug Advertising," Ph.D. dissertation, Mass Communications, University of Iowa, 1984. Pp. 412.
 - (2) Michael O'Neill, "Innovative Practices in State Funded Community Health Agencies: The Case of Quebec's Community Health Departments," Ph.D. dissertation, Sociology, Boston University, 1986. Pp. 514.
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34 Bruce F. Baker, "Illich and Kierkegaard Recombined," *Philosophy of Education: Proceedings* 34 (1978): 410-416. Leroy F. Troutner, "Illich and Kierkegaard Combined," *Philosophy of Education: Proceedings* 34 (1978): 397-409; Carl G. Hedman, "The 'Deschooling' Controversy Revisited: A Defense of Illich's 'Participatory Socialism,'" *Educational Theory* 29 (Spring 1979): 109-116.

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37 Ivan Illich, "Shadow-Work" and "Vernacular Values," *Philosophica* (Belgium) 26 (1980): 7-46 and 47-102, respectively.

38 Ivan Illich "Subsistence," in Kenneth Vaux, ed., *Powers That Make Us Human* (Chicago: University of Illinois Press, 1985), pp. 45-53.

39 Anthony Weston, "Ivan Illich and the Radical Critique of Tools," *Research in Philosophy and Technology* 9 (1989): 171-182.

40 On Illich: Brian Birchall, "Some Misconceptions in Ivan Illich," cited above from *The Philosopher's Index*. By Illich: "The Dawn of Epimethean Man," a version of the conclusion of *Deschooling Society*, published by CIDOC as part of a colloquium on the work of Erich Fromm in 1972.

41 Alessandro Dall'Olio, S.J., "La critica sociale di Ivan Illich," *Civiltà Cattolica* 127 (1976): 48-53.

42 Hans Achterhuis, *Filosofen van de derde wereld*. Frantz Fanon, Che Guevara, Paulo Freire, Ivan Illich, Mao Tse-Toeng (Bilthoven: Ambo, 1975); Herbert Gintis et al., *Critica de Ivan Illich* (Barcelona: Anagrama, 1975); and Hubert Hannoun, *Ivan Illich o la escue-la sin sociedad* (Barcelona: Edicions 62, 1976).

43 The French and German editions of *Medical Nemesis* are, incidentally, virtually new books: *Nemesis medicale: l'expropriation de la sante* (Paris: Seuil, 1975); *Die Nemesis der Medizin*, trans. Thomas Lindquist (Reinbek bei Hamburg: Rowohlt, 1981). Each, for instance, contains its own distinctive set of copious references to French and German literature.

44 In the bibliography appended to Carl Mitcham and Robert Mackey, eds., *Philosophy and Technology: Readings in the Philosophical Problems of Technology* (New York: Free Press, 1973) there are no books by Illich, since his work had not yet explicitly addressed the question of technology. His only published books at that time are two theology collections from 1970 and *Deschooling Society* (1971). But the revised bibliography in the paperback reprint (1983) does include *Tools for Conviviality*, annotating it as "alternative technology" literature. However, the *Bibliography of the Philosophy of Technology* (Chicago: University of Chicago Press, 1973) which grew out of work on *Philosophy and Technology*, does annotate *The Church, Change and Development* (1970), a volume which was more or less privately published, in the section on "Religious Critiques: Secondary Sources." The first update to the general bibliography covering the years 1973-1974 includes Illich's

Tools for Conviviality with a substantial annotation; see Carl Mitcham and Jim Grote, "Current Bibliography in the Philosophy of Technology: 1973-1974," *Research in Philosophy and Technology*, 1 (1978): 313-390. A second bibliographic update for 1975-1976 includes an entry on *Medical Nemesis*; see Carl Mitcham and Jim Grote, "Current Bibliography in the Philosophy of Technology: 1975-1976"; the bibliography constitutes an entire issue of *Research in Philosophy and Technology*, 4 (1981): 1-241. A third bibliographic update for 1977-1978 has an entry on *Toward a History of Needs* (1978); see Carl Mitcham and Jim Grote, "Current Bibliography in the Philosophy of Technology: 1977-1978," *Research in Philosophy and Technology*, 6 (1983): 231-289.

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45 Lane DeMoll and Gigi Coe, eds., *Stepping Stones: Appropriate Technology and Beyond* (New York: Schocken, 1978).

46 See note 3.

47 Malcom Hollick, "The Appropriate Technology Movement and Its Liberation: A Retrospective," *Technology in Society* 4, no. 3 (1982): 213-229.

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- 48 See especially "The Three Dimensions of Public Choice" and "Research by People" in *Shadow Work* (Boston: Marion Boyars, 1981), pp. 7-26 and 75-95.
- 49 Ivan Illich, *Gender* (New York: Pantheon, 1982), pp. 91-93.
- 50 Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* (Cambridge, Mass.: MIT Press, 1977); and *The Whale and the Reactor: A Search for Limits in an Age of High Technology* (Chicago: University of Chicago Press, 1986).
- 51 Don Ihde, *Technics and Praxis* (Boston: Reidel, 1979); and *Existential Technics* (Albany: State University of New York Press, 1983).
- 52 Mihaly Csikszentmihalyi and Eugene Rochberg-Halton, *The Meaning of Things: Domestic Symbols and the Self* (New York: Cambridge University Press, 1981).
- 53 Albert Borgmann, *Technology and the Character of Contemporary Life: A Philosophical Inquiry* (Chicago: University of Chicago Press, 1984).
- 54 Winner, *Autonomous Technology*, p. 240, mentions Illich along with Ellul, Mumford, Marcuse, and Goodman. But each of the other four, with one or more of his works cited, is discussed at some length. The only place to find Illich's full name is in the index; and no works are cited.
- 55 Ellul, *Technological System*, pp. 335, n. 22; 339, n. 4; 348, n. 7; and 355, n. 13. All references are to *Tools for Conviviality*. See also Ellul, *Technological Bluff*, p. 108: "Ivan Illich was the best if not the first of those to emphasize thresholds."
- 56 Winner, *Autonomous Technology*, pp. 326-327. There are some minor citation mistakes in Weston.
- 57 Weston, "Ivan Illich and the Radical Critique of Tools," p. 182, note 6.
- 58 Winner, *The Whale and the Reactor*, pp. 72 and 141. The first reference is to no particular work; the second, to *Medical Nemesis*.
- 59 *Ibid.*, pp. 28-29.
- 60 *Ibid.*, p. 39.
- 61 Ihde, *Technics and Praxis*, p. 21.
- 62 Csikszentmihalyi and Rochberg-Halton, *The Meaning of Things*, p. 16.
- 63 Baudrillard, *Le système des objets*, from the translation in Mark Poster, ed., *Jean Baudrillard: Selected Writings* (Stanford, Calif.: Stanford University Press, 1988), p. 24. Italics in the original.
- 64 Poster, *Baudrillard: Selected Writings*, p. 25.
- 65 Borgmann, *Technology and the Character of Contemporary Life*, pp. 167-168. Illich is also mentioned in passing and/or footnoted on pp. 125, 145, and 278.
- 66 *Ibid.*, p. 41.
- 67 *Ibid.*
- 68 *Ibid.*, p. 42.
- 69 *Ibid.*, p. 220.
- 70 *Ibid.*

Postscript: “*Tools for Conviviality: Argument, Insight, Influence*” Three Decades Later

Of Ivan Illich’s many books, *Tools for Conviviality* is the most insightful and concise presentation of what may be called his political philosophy of technology. This paper was originally prepared for a symposium celebrating Illich’s 65th birthday and 5th year as visiting professor in the Pennsylvania State University Science, Technology, and Society Program. The symposium was initiated by Rustum Roy and organized by Leonard Waks, who after the event gathered selective talks for publication as a symposium on “Ivan Illich’s Philosophy of Technology” in the Society for Philosophy and Technology annual publication *Philosophy and Technology*, volume 8 (1991). The symposium included papers that dealt with Illich’s criticism of schooling (*Deschooling Society*, 1970), dominating techniques (*Tools for Conviviality*, 1973), health-care (*Medical Nemesis*, 1976), and urban planning (*H₂O and the Waters of Forgetfulness*, 1987).

Illich’s argument is a second generation deepening of one of the three philosophical approaches to technology that emerged in the 1950s during its “classical period”. “Classical” here refers to an originary recognition of modern engineering and technology as a historically unique, science-associated form of designing, producing, and using artifacts, which began with the Industrial Revolution and has since progressively transformed itself and the world. Efforts to think critically rather than promotionally about this mutation in productive life can be traced back to Jean-Jacques Rousseau (1712-1778), Jeremy Bentham (1748-1832), Robert Owen (1771-1858), and Karl Marx (1818-1883) and led eventually to a privileging of “technology” as a socio-cultural determinate. This concep-

tual focus on technology first emerged in the 1950s, primarily in England, Germany, and France.

For purposes of orientation, consider three key texts: Alan Turing's "Computing Machinery and Intelligence" (1950), Jacques Ellul's *La Technique ou l'Enjeu du siècle* (1954), and Martin Heidegger's "Die Frage nach der Technik" (1954).¹ Each represents a different approach, not just to technology but also to philosophy.² Each has become a classic reference in one or more traditions in the philosophy of technology insofar as it can serve as a pivot from which we can look forward and backward. Turing did conceptual analytic work on computing and information technology to explore ways that thinking itself can be replicated by machine learning. Ellul developed a theory of society transformed by technological thinking into social life dominated by the optimization of means valued as an overriding good. Heidegger advanced a phenomenological reflection on *Technik* as disclosing the world as *Bestand* or resource through a historical spirit of *Gestell*. Each thus initiated the more or less distinctive traditions of analytic, social-political, and ontological philosophies of technology that continue to cast shadows across the present.

An Ellul-Illich relationship is acknowledged by both. It's not difficult to find references by Ellul to the work of Illich. *Le Systeme technicien* (1977), which revisits and critically extends the argument of *La Technique* (1954), makes pointed use of *Tools*. Illich's book, Ellul wrote, "has an excellent view of

1 Alan Turing. (1950) "Computing Machinery and Intelligence" *Mind*, New Series, 59, no. 236 (October), pp. 433–460. Jacques Ellul. (1954) *La Technique ou l'Enjeu du siècle*. Paris: A. Colin. English version, John Wilkinson, *The Technological Society* (New York: Random House, 1964). Martin Heidegger. (1954) "Die Frage nach der Technik" In *Vorträge und Aufsätze*. Pfullingen, Germany: Neske, 13–44. English trans. by William Lovett, "The Question Concerning Technology." In *The Question Concerning Philosophy and Other Essays*. New York: Harper and Row, 1977, pp. 3–35.

2 Carl Mitcham. (2023) "What Is Living and What Is Dead in Classic European Philosophy of Technology." In Shannon Vallor, ed., *Oxford Handbook of Philosophy of Technology* (New York: Oxford University Press), pp. 19–34.

the technological system when he shows that 'the functioning and design of the energetic infrastructure of a modern society impose the ideology of the dominant group with a force and penetration inconceivable to the priest ... or the banker' (chapter 4, note 22). And Ellul later acknowledges that "Illich sees [the] connection between technologies perfectly when he shows the correlation between teaching and technological growth, or between the latter and the massive organization of 'health'" (chapter 6, note 4).³

In November 1993 Illich made a pilgrimage to Bordeaux to pay personal homage to Ellul. In Illich's words, "Ellul continually recaptures the fundamental intuitions of his earliest work, always clarifying them more. His tenacity, humility, and magnanimity in the face of criticism make him an example one must bow to." Illich went on to remark how discovering Ellul's concept of *Technique* in the 1960s enabled him "to identify — in education, transportation, and modern medical and scientific activities — the threshold at which these projects absorb, conceptually and physically, the client into the tool; the threshold where the products of consumption change into things which themselves consume; the threshold where the milieu of technique transforms into numbers those who are entrapped in it; the threshold where technology decisively transforms into Moloch, the system."⁴

The Ellul-Illich connection is further recognized by Jean Robert, one of Illich's close philosophical friends, who describes Ellul and Illich as authors working "on parallel tracks in their efforts to name the post-industrial *Erewhon* and to devise concepts to understand its elusive new threats." In their later works, argues Robert, both thinkers departed

3 Jacques Ellul. (1977) *Le Systeme technicien*. Paris: Calmann-Lévy. English trans. Joachim Neugroschel as *The Technological System* (New York: Continuum, 1980).

4 Jacques Ellul and Ivan Illich. (1995) "Statements by Jacques Ellul and Ivan Illich," *Technology in Society*, vol. 17, no. 2, pp. 131-138.

from their early

analyses of “the technological society” and of “convivial tools,” respectively, and proposed the word “*System*” to name what lies beyond the age of instruments. Both understood that a unique historical mutation had rendered obsolete the very concepts that had previously allowed them to be unusually acute analysts of the late Technological Age. Both saw the mutation of the technological society into the system as a betrayal of the vocation of the West, by the West. This vocation is a call to freedom. Tools are compatible with freedom if they are available to both be taken up and put down. This double possibility can only be preserved when tools are strictly limited in power, size, and number.⁵

Illich’s thinking on technology not only ran on a parallel track with that of Ellul, but he also contributed to the sociological philosophy of technology engendered in Ellul’s work. Illich’s contribution is at least two-fold, corresponding to the shift Robert identifies, from tools to systems. The key concept in the analysis of tools was counterproductivity. As Illich spelled this out in *Medical Nemesis*,

paradoxical counterproductivity ... is now surfacing in all major industrial sectors. Like time-consuming acceleration, stupefying education, self-destructive military defense, disorienting information, or unsettling housing projects, pathogenic medicine is the result of industrial overproduction that paralyzes autonomous action. In order to focus on this specific counterproductivity of contemporary industry, frustrating overproduction

5 Jean Robert. (2023) “Beyond Tools, Means, and Ends: Explorations into the Post-Instrumental Erewhon, in Glen Miller, Helena Mateus Jerónimo, and Qin Zhu, eds., *Thinking through Science and Technology: Philosophy, Religion, and Politics in an Engineered World* (New York: Rowman & Littlefield, 2023), p.244

must be clearly distinguished from two other categories of economic burdens with which it is generally confused, namely, declining marginal utility and negative externality. Without this distinction of the specific frustration that constitutes counterproductivity from rising prices and oppressive social costs, the social assessment of any technical enterprise, be it medicine, transportation, the media, or education, will remain limited to an accounting of cost-efficiency and not even approach a radical critique of the instrumental effectiveness of these various sectors.⁶

Later, in a turn from social criticism to historical archeology, Illich sought to walk backward into the past in order to look with new eyes at what he had first seen in *Tools*, finding there the counterproductive influence of a Christian ecclesiology: technological system as secularized church. This was, again, an insight shared with Ellul, but whereas Ellul stressed the manifestation in social relations, Illich found it operative in the body, in our somatic self-experience.

Indeed, insofar as the concept of counterproductivity is anchored in the frustrations of bodily capacities and distortions of felt perceptions, life becomes literally senseless. Accordingly, Illich's body history offers a challenge to thinking about technology either in terms of Turing's mind as symbol processing machine or as Heidegger's *Gestell* mythologized techno-lifeworld. Grounded in bodily presence, Illich's work on the text and the alphabet refused the identity between speech, text, and symbol processing favored by the Turing machine. Similarly, by historicizing the very category of instrument, Illich undermines the ontologizing of the engineering stance in Heidegger.

6 Ivan Illich. (1976) *Medical Nemesis: The Expropriation of Health*. London: Marion Boyers. p.215

Put another way, Ellul the Protestant anarchist seeks to live by faith alone; Illich, a Catholic anarchist seeks to recover the body and the self-accepting askesis of convivial pleasures. While Turing promises life attached to speed thinking programs and Heidegger the mystery of presocratic *Gelassenheit*, Illich invites us to share a meal and breathe together the earthy air of friendship.

p. 99-102 | Andre Barone

Untitled (after drawing by Ernesto Bonato), photography, 2023

21,6 x 14,2 cm









Introduction to *The age of systems* in *Illich's later thinking**

by Jean Robert

When Ivan Illich was in his teens, a fortune teller once told him that he was going to invent a 'science that does not exist'. As a grown man, he undertook a number of research endeavours that focused on 'the axioms underlying our social theorems', 'the typology of the late modern mind', 'historical somatics' (a history of the self-perceived body in past eras), a history of the gaze, and the social history of alphabetic culture. He kept himself abreast of all the trends emerging in the 'industrial society', of which he had been one of the most coherent critics.

In the 1970s the whole world became his audience. At the time he seemed to personify the medieval *magister*, at whose feet students sat. The latter included for instance Majid Rahnema, who was four years his senior and who had served as Iran's minister of higher education: Illich taught him how to use computers, and also used to assign him training exercises as homework. 'Majid, Majid, what have you done this time?', Ivan was wont to say whenever Majid made a mess of things. Furthermore, he appeared to be able to speak all languages, and to have read everything there was to read. His charm was particularly effective on people such as Jean-Pierre Dupuy, a professor at Paris' École Polytechnique. The philosopher Martin Fortier seems to believe

* This introduction is to Jean Robert's Italian book titled *L'età dei sistemi nel pensiero dell'ultimo Illich*, (Hermatena, Bologna, Italy 2019). It outlines the book for which I'm hoping to find an English language publisher. The translation is by Edoardo McKenna (Ed.).

to this day that Illich had perfected an infallible method of argumentation capable of unmasking *modernity's irrationality*. Fortier called this method *peirastic*, and blamed Illich for not having subsequently kept his criticism within the framework of that kind of rationality (which, all things considered, is unsurprisingly French). In his view, Illich did not remain faithful to French rationality for long. In fact, he believed Illich had opened himself to far too many "irrational" influences, which allegedly later drove his friends and colleagues within the École Polytechnique to distance themselves from him. There are even some who claim that what he wrote after 1980 is not worth reading.

In truth, the 1980s was the period in which Illich came to understand the importance of the *lumen sub quo*, of the light which the eye projects on things, or, more literally, of *the light under which* one chooses to see. This light or *lumen* allegedly represented the complement of *lux*, the impersonal light that emanated from techno-science as if from the sun, and which exclusively illuminated concepts. Illich perceived something apocalyptic in the modern mentality and in the light (*lux*) of its totalitarian concepts. In the 1990s, he became painfully aware of that mentality's drift towards a systemic thought which had no place, among all of its symbolic devastations, for any revelatory intuition: everything was normal, and awfully so.

The present book has the ambition of introducing some of the ideas which Illich developed, either orally or in writing, over the last twenty years of his life. They concerned examining and understanding the present with the eyes of a historian, and "historicising" the guiding principles and the certainties that shaped the typology of the late modern mind. There were however two new intuitions that began to inspire Illich after the early 1980s:

1. Those certainties, which were seldom questioned, were not purely conceptual and were far from being “scientific”, but relied in fact on tangles of conceptions and perceptions, and of concepts and precepts. ‘The social body determines the way in which the physical body is perceived’, which in turn supports a specific view of society. The historian Barbara Duden, a member of the ‘West German Women’s Movement’ whom Illich met in Berlin around 1980, may have pointed out to him that aphorism by Mary Douglas, which was devised in the context of her ‘theory of the two bodies.’ After 1980, Illich undertook with Barbara Duden a wide-ranging programme for the exploration of physical perceptions and of their contribution to the crystallisation of what contemporary man held to be true.

2. Illich’s second intuition did not spring up ready-made in his mind, but actually took shape in stages: after the 1970s, mankind was faced with the most dramatic upheaval (an epistemological landslide, in Illich’s own words) in the history of the second Christian millennium, which he believed to have been caused by the weakening of a certainty that was initially theological, and later techno-logical: namely the one according to which some objects were made to obey a certain kind of intentions, be they divine or, at a later stage, human. They were what we nowadays know as tools, and what medieval Latin designated with the word *instrumenta* (*instrumentum* in the singular).

The still nameless epistemological upheavals that followed hard upon one another after the end of the 20th century were allegedly a kind of ‘farewell to the tools’ which we are still unable to express properly. We still call tools (or ‘technologies’) artifacts which in fact do not serve (or do so less and less) human intentions.

The scholastic philosophers who after the 12th century developed a more precise definition of *instrumentum* did so by adding a fifth cause (*causa instrumentalis*) to Aristotle's four causes (*materialis, formalis, finalis, efficiens*). Thereafter the tools became an instrumental cause, and the "technological" age that was about to begin was more adequately defined as the *instrumental* age. Illich later hypothesised that the instrumental age entered its decline in the years between 1970 and 1980.

Many of Illich's readers and friends sink into an embarrassed silence when questioned about these two daring hypotheses. In the present book I intend to clearly distinguish what might be true (and what I consider to be as such) and what may be refuted 'for the lack of empirical evidence', a prediction held to be feasible by the philosopher Martin Fortier, who was a staunch opponent of Illich's concept of *distality* (the modern term with which Illich designated the principle formulated in the 12th century of the degree of separation that is a constitutive element of the relationship between the tools and their users' body).

Illich was one of those thinkers who pushed themselves to the limit. He did not try to identify the solid stepping stones in a ford, but rather the shaky one right in the middle that enabled them to think the unthinkable. That could also be the top of the witches' wall, the double ghetto, the time gap between the celebration of the instrumental certainties' demise and systemic thought's looming threat. It was also the moment when new possibilities could arise, as for instance gratuitousness.

Was Illich a pioneer of degrowth? Indeed, he was not. Did he perhaps address it with different words? The reply to that question ought to be carefully worded. What Illich proposed was *concerted negative growth*. It did not concern the kind of degrowth that sets in without planning, but rather a

political decision in favour of negative economic growth as a response to the industrial age's intrusive sexism.

Illich believed that sexism inevitably followed economic growth and that growth was always associated with the scarcity that was perceived right amid abundance. Illich was convinced that the voluntary reduction of the *economic nexus* (i.e., the degree of one's personal involvement in market economy) was the precondition for gender equality in modern society. Industrial societies always had 'a high economic nexus' (or, in other words, a high level of perceived scarcity), and were concomitantly sexist. Illich carefully avoided mixing up modern-day sexism with the relics of the patriarchal order inherited from the past. He claimed they were not the same in nature, as *sex* was fundamentally different from *gender*, in the same way that societies organised in accordance with economic laws based on the axiom of scarcity could not be compared to subsistence societies, which could experience indigence, but not what has been known to economists as scarcity since the end of the 18th century. The patriarchal order is undeniably open to criticism but remains a relic of a society that is no longer ours.

Both gender and sex clearly prove that men and women exist, but gender is not the historical antecedent of sex. Claiming that it was such is a perversion of the truth which Illich ascribed to most university courses on 'gender studies.' Since sex was the perceived contraposition between *human beings* differentiated by bulges under blouses or in trousers, it was a novelty without any historical antecedents, a present without a past, which was a source of profound anxiety.

Illich's idea seemed to be that certain modern circumstances and notions constituted a complete break with the past. An example of this idea is that of a hyper-alphabetised society, ideally bereft of any link whatsoever to orality. That idea was compounded by the fact that modernity refused to

take stock of such a break: for instance, reference is usually made to ‘oral *literatures*’ or subsistence *economies*. What Illich claimed about the alphabet in the last years of his life can also be said of the idea of sex in the economic society: it is a reality that was inconceivable before its birth, and whose absence was unimaginable after its emergence. Alphabetised people have become incapable of understanding the oral world’s specificity, and whenever they attempt to do so, they colonise it with hopelessly alphabetic concepts, in the belief they may discover, for instance, islands of ‘oral literature’ within the archipelago of orality. By the same token, ‘gender studies’ often reconstructs the concept of gender, which has historically vanished and which can be perceived in the present only with great difficulty, on the basis of the evidence provided by a sexed society, i.e., by a society dominated by what Illich called *economic sex*, in which sex mingles with the scarcity perceived in the midst of an abundance of goods and services.

In the words which Barbara Duden delivered at a seminary organised in Paris in 2010:

The second half of Ivan Illich’s life was (...) a sort of terra incognita – especially as far as the French “maps” were concerned – from which two islands suddenly emerged: *Gender* and *In the Vineyard of the Text* (Duden, 2010, p. 137).

This introduction is devised as a map, a compass, and an instruction manual of sorts. It consists of paragraphs that focus on clearly-defined issues linked to the second half of Illich’s journey as a thinker engaged in deciphering modern concepts in the mirror of the past. Whenever I have occasion to evoke the years before 1980, I shall endeavour to do so with both feet firmly planted in that bygone past while keeping my gaze fixed on the present.

The convivial tool and Cuernavaca's 'kitchens of the future'

The documentarists Marie-Claude Deffarge and Gordian Troeller, who shot a film about CIDOC in 1975, used to informally refer to that place as 'kitchens of the future'. At the time Illich believed in the feasibility (and perhaps also in the imminence) of a *revolution of the tool* that could put on trial the *industrial tool*, whose size and power had become disproportionately vast, and which could eventually be replaced by the *convivial tool*, one which would not exceed the appropriate measure, would require the contribution of its user's physical force, and would reduce the consumption of exogenous energy. From a conceptual point of view, the industrial tool and the convivial tool are in opposition as are *heteronomy* (the submission to someone else's law) and *autonomy*.

An industrial product that expands its users' scope of action... and its opposite

The industrial tool encourages heteronomy: its users are controlled by a (professional or administrative) power that is different from their own. Conversely, the convivial tool is strengthened by the autonomy of its users and allows for a *positive synergy* between autonomy and heteronomy. The industrial tool gets stuck in the *negative synergy* between what one can do on his own and what one has to ask others to do for him. For example, the end of the 19th century saw the emergence of two technical devices, two tools that relied on the same mechanical innovations: the bicycle and the motorcar. The former was an instance of a convivial tool, while the latter was the prototype of all industrial tools.

Bicycles are an industrial product that I would not be able to assemble in my backyard: almost all of the pieces of which they are made (their metal frame, their wheel spokes that work under tension, and their wheel hubs fitted with ball bearings) are products of the late 19th century's mechanical industry.

Bicycles are an instance of positive synergy. Motorcars, on the other hand, are an instance of the negative synergy between autonomy and heteronomy. The first motorcars, which were equipped with four wheels and a combustion engine, relied in all other respects on the same feats of mechanical engineering that were also to be found in bicycles.

In large cities with an underground rail system such as New York, London, Paris, or Mexico City the average speed developed by motor vehicles throughout the day (about 9 mph) is lower than the speed that may easily be reached on a bicycle, and it is even lower in those cities that do not possess an underground transport system. Once the positive synergy between what one can do on one's own and what one has to ask others to do in one's stead has been broken, it triggers a spiral cycle in which every instance of increased heteronomy leads to a demand for greater heteronomy. The outcome is a type of urban traffic with high energetic costs, which favours the already growing heteronomy, and is, on average, less fast-flowing than a kind of urban traffic with low energetic costs and based on the positive synergy between autonomy and heteronomy. The industrial *ethos* could be summarised as follows: nothing is to be done on one's own, there must be no productive muscular work, and everything must run on engines: a world of conveyor belts and escalators, of self-opening doors, and of lifts that reach the second floor.

An unsettling hypothesis: the end of the age of the tools

The historian Illich (who still counts as the only historian who has ever been alert to it) expressed his conviction that the last years of the 20th century represented a radical break, one of the greatest rifts in the whole history of the world that had been born out the faith in the Incarnation of the Word: the Western world. In his view, it was the end of the age of the tools. One of the warning signs in that sense was

allegedly the intrusion in common speech of the terminology associated with a new “pop science”, which had been generated by the concepts of cybernetics and systems analysis after their escape from their scientific domains of origin. This invasion of “plastic” words, which deprive speakers of the power to shape the meaning they intend to give to their words, coincided with the instability that marked the end of the Glorious Thirty, the three decades of economic growth that occurred after the end of the Second World War.

The first symptoms of the end of the age of the tools

Around 1970, before the massive impact of cybernetic and systemic concepts on people's mentality, it was already possible to detect some signs of the twilight of the industrial *ethos*. Is it not about time, Illich wondered, to write an epilogue for the industrial age? In order to find an answer to that question it became necessary to place at the centre of the debate the concept of one object, the *instrumentum*, which was defined at the time of its appearance in the Middle Ages as mechanic, a word whose etymology Hugh of Saint Victor ascribed to Greek *moichos* (the adulterer).¹ Once cautiously accepted in the 12th century, the *instrumentum* became, in the following century, one of those objects that exemplify an era, which Paul Veyne defined as *objets biscornus* (weird and unpredictable objects). Since the 14th century at the very earliest, underneath every discussion on “technology” and its

1 In his imagined dialogues with Dindimus (an Indian wise man), Hugh of Saint Victor (cf. Illich, 1991) introduced him to the concept of tool, which was beginning to spread especially thanks to *De variis artibus* (1128) penned by Theophilus Presbyter, which for the first time presented craftsmen's tools as if they could be separated from their users' hands. That approach seemed to somehow suggest giving one's body to the first comer. The English expression 'sowing wild oats' (which in Italian would translate as *correre la cavallina*) aptly depicts the vague feeling of impropriety caused by the new tool. It is perhaps what Hugh had in mind when he hypothesised that the word *mechanics* derived from Greek *moichos*, the adulterer (cf. Illich, 2005, Italian translation, p. 60).

advances, the “tool” object, which is polymorphous and, in the industrial age, constantly evolving (and perhaps also on the brink of extinction), has summarised the essence of an age in which ‘the tool was the answer to all questions’. Illich came to understand that industrial society and its fate could be interpreted through the tool’s metamorphosis.

What differentiated the 1970s from the 1980s in *Ivan Illich’s thought* was the fact that during the first decade he still saw the tool as one of history’s unchanging elements. It was necessary to wait until the 1980s for Magritte’s ‘this is not a pipe’ to be applied to the tool, when Illich understood its deep *historicity*. Just try to imagine a computer bearing the caption: ‘This is not a tool’.

The 1980s: concepts and perceptions

Was Illich a sociologist, an economist, a historian, a philosopher, or a theologian? To the eyes of those who believe that those categories structure thoughts and also designate professions capable of imparting the one true knowledge in a given field, Illich might have seemed to be a Jack-of-all-trades and an amateur. Though those who knew him and saw him at work considered him to be a passionate researcher who rebelled against all restrictions, also (and especially) in a specialised field characterised by hypertrophic scientific aspirations. After lifting a stone under which he had seen something move (such as for instance the possibility of a history of the *sensory perception* of the body that went beyond the notions with which anatomy and physiology described it), he was able to examine that something from different angles, including those of official science, without ever becoming compliant with their dogmas. Since he could not accept the certainties of the topology of the modern mind, and he was at the same time incapable of conceiving himself as living in the past (which was no more), he lived,

as he stated himself, in a *double ghetto*.

If I were asked to describe in one sentence the cooperation lasting more than two decades between the historians Ivan Illich and Barbara Duden, I would quote the following one: 'The spindles on which the sensory perceptions of an age were spun were buried in the soils of history far more deeply than the looms on which its conceptual certainties were woven.' Those are the words of archaeologists of perceptions and historians of ideas. Since the general object of their studies was the topology of the modern mind, its exploration required them to walk on both legs. Indeed, around 1980, Illich regretted having until then carried out his analysis of modern ideas in an exclusively conceptual fashion, thereby walking with only one eye open or on just one leg.

Thereafter he focused his attention on the aggregates of sensory evidence and of the generally inherited ideas that constitute the foundations of the topology of the modern mind. Together with his friends and colleagues, he undertook a sort of archaeological exploration of those certainties. He embarked with them on research on the five physical senses and (especially with Barbara Duden's help) on the history of the inner perception of the body, as well as on Antique optics and the transformation of the gaze into a tool after the 11th century.

Illich defined the age of the tools as the period that ranged conceptually from the 12th to the 20th century, and "technologically" from the 14th to the years 1970-1980. The rise and fall of the tool as 'the key that opened all doors' delimit an age of the tools in which those aged fifty or more still have one foot. The instrumental age was that of the instrumental means, a metaphorically luminescent object which, not unlike Borges' Aleph, enabled the whole world to be seen under its light. It is in that sense that I shall consider Ivan Illich as a historian of the tools, and the present book as a tribute to a histo-

rian of the tools who is still little known in that capacity.

Previously: the years of Illich's media fame

The 1970s were conversely the years in which Illich was a famous personality. At the time his criticism of industrial society made explicit an intuition that was shared by many critical spirits the world over: the institutions that provided services (education, transport, medical health) were *counter-productive*, and delivered the opposite of what they promised. Illich proceeded to *prove* his point sequentially in relation to the institutions that provided services in the fields of education, transport, and health, and he was widely read. Schools brought about absentmindedness, transports led to a paralysis, while medicine made bodies ill, and above all impaired their ability to self-protect. At that time, his books were translated into dozens of languages, and their circulation was in the range of five or six digits.

CIDOC and Cuernavaca

In those years Illich's name was associated with an institute known as CIDOC (the Centre for Intercultural Documentation), which had its seat in one of Mexico's provincial cities, Cuernavaca, and which was to become a pilgrimage destination for many intellectuals from all over the world who were beginning to understand that 'things cannot go on like this'. In that period Illich himself believed it was important to start preparing the great debates that were to mark the end of the 20th century without further ado.

Those debates, however, never took place. In order to do so they would have required what Jacques Ellul called a burst of freedom. The late 1970s were characterised by a backwash of fatalism and conformism, which I believe was due to the spread of the systems theory's notions, their acceptance as metaphors of society, and the intrusion into our language of

neologisms that helped to modify the self-perception of those who employed them: *input-output*, flight data recorder, population curve, the human body as immune system.

What else was CIDOC, if not a place of freedom whose visitors did not wish to become integrated into the system? It may seem a paradox that Ivan Illich's personal friends and CIDOC's visitors included a thinker such as Heinz von Foerster, who acted as secretary for the Macy Conferences (during which concepts that constituted a sharp break with conventional notions on causality were developed in the 1950s), and who introduced the term *cybernetics* (derived from a Greek word that means helmsman, pilot). At a conceptual level, questioning the concept of causality and replacing it with that of program already represented bidding a farewell of sorts to the concept of instrumental cause, the backbone of the age of the tools.

CIDOC was a 'free university' with no exams or diplomas, a *think tank* where industrial society's concepts and guiding principles of the 1970s could be discussed contrastively, and where everybody became in turn teacher and student. Valentine Borremans, who directed it, encouraged all auditors-students-professors to shed the yoke of what she called *industrial ethos*, according to which the rich were the vanguard of a way of life that was fated to be adopted by everybody, a grotesque delusion that has nowadays been so thoroughly belied by facts that only the most cynical can still support it.

The industrial ethos

Ethos is a Greek word whose etymology is related to the English word *gait*, which designates one's *own* posture and way of walking. The industrial *ethos* is a gait in which each new step requires renouncing one's autonomy. The corridors of the Montparnasse-Bienvenue station of Paris' underground sys-

tem force me to walk a great deal, but my muscular efforts are a kind of ghost work that only serves the purpose of supplying the local transport agency with new passengers. If *autonomy* is the ability to act with one's own means within the context of accepted restrictions, its opposite, namely *heteronomy*, is a Hobbesian surrender of the right to exercise one's freedom in favour of the progressive elimination of all limitations. It follows that one of the topics debated in the conversations that took place at CIDOC concerned *limitations*, which were defined at a political level and accepted in a convivial fashion.

One of the seminars convened by Valentine Borremans revolved around the topic of *the technological imperative*: whichever technological advance turned out to be achievable in whichever part of the world, it had to be made available to the ruling *elites* regardless of the price that the majority of the world's population was forced to pay.

A society based on heteronomy, which in order to exist needs to tolerate the destruction of autonomy

Since there can be no ethics without autonomy, one has the ethical duty of containing the renunciation of one's autonomy. In the 1970s Illich believed that industrial society was a society in which the conditions of existence were progressively being eroded, thereby freeing the horizon for the pluralistic invention of post-industrial societies. Ten years later there was the finalisation of the constitutive elements of a form of social cybernetics that threatened to consign to the oblivion of history the tool placed at the service of *human intentions*.

A countermove: research on sensory perceptions

I do not perceive myself as you see me. The eye is not the most ideal organ to perceive the 'darkness under my skin' that is my flesh. Together with the historian Barbara Duden,

Illich opened new paths and explored new lands, which he named as if they could really become new intellectual disciplines. For instance, with their decision to designate the body by its Greek name, *sōma* (the felt body), rather than by a derivation of the Latin word *corpus*, which always evokes a whole seen from the outside, Illich and Duden undertook a long study, which they called *historical somatics*, on the self-perception of the body in some of the past ages. It was a study on perception, or rather on the *self-ception* of what is the most concrete element in existence, the *concretissimus*, namely flesh. Their intuition brought to light unforeseen objects of study, which did not entail immediate subservience to pre-established scientific disciplines. Would it not be sometimes possible to weave new disciplines out of the weeds that grow among the rocks on the beaten path? It was not a case of invention for its own sake. Ivan Illich and Barbara Duden aspired to shed new light on the topology of the modern mind. It was therefore a search for the *lumen sub quo*, for the light under which that topology was to reveal its true nature.

Illich, a theologian who became a historian and a philosopher of tools

The present book strives to provide an answer to one question. The most recent writings (be they books or articles) on Ivan Illich avoid (or at any rate avoid tackling directly) an issue which I see as central in his work, namely that of the tools. Illich was a theologian, a philosopher and a historian, and especially a *historian of the tools*. He placed great emphasis on the historian's ability to make accessible topics that were generally seen as theological, such as 'the corruption of what is best that generates the worst' which a French editor chose as the title for his edition of the last conversations between Illich and David Cayley (Illich and Cayley, 2007 [2005]). One of the mysteries of evil is that the culture which was born from

faith in the Incarnation of the Word has become the most dis-incarnated of all documented cultures, as if the heights of love which the Incarnation afforded was matched by the depth of a symmetrical abyss of disincarnation and indifference towards the others.

Although the reflection was inspired by theology, the historian soon replaced the theologian, and stated: after the 12th century it is possible to document some of the steps taken towards the disincarnation of the word (with no capital letters, and understood as a mere word). It was for instance on those very steps that the four or five books and articles which Illich devoted to the social history of the alphabet intended to shed light, with no recourse to theology, and in a way that was accessible to both believers and agnostics. In those writings, Illich drew his readers' attention to a few moments in history when significant steps were taken on the path of progressive disincarnation represented by the 'march towards modernity'. One of those moments was the generalisation of silent reading after the 13th century.

Taking a step back: 1976, the closing down of CIDOC

The closing down of CIDOC, which took place in 1976 during a memorable celebration, forced Illich to reconsider his way of living. The proceeds from the sale of his books dropped significantly, especially after a misunderstanding that was shrewdly exacerbated by a handful of feminist professors from Berkeley, who strove to shift the debate onto an ideological ground where he flatly refused to follow them.

Illich then decided to earn his living by becoming a wandering philosopher or a beggar, as he stated himself on several occasions. Neither one nor the other produced any useful values, nor did they have the pretension to *justify* the right to suckle milk from their *alma mater*. Since he had

nothing to lose, Illich defined rigorously the conditions of his engagement with university education:

- no more than a three-month term per year at each university;
- complete freedom to choose topics, that is to say, the rejection of any imposed curriculum and of any incorporation under the aegis of specific disciplines or programs;
- a refusal to give marks or diplomas to his students;
- his teaching commitments were to be limited to one afternoon per week.

What was not stipulated by contract and cannot be seen as anything other than a disinterested gesture on his part was the fact that Illich made his own home, his small library and his cellar available to those who attended his lectures and their friends. The weekly *living room conversations* (which sometimes lasted many days) at his place in Foster Avenue caused a sensation at the Pennsylvania State University (*Penn State*). After a decade of similar initiatives in Bremen, Germany, its local authorities awarded him a prize and symbolically presented him with the keys of the city, just as they had done a few years before in tribute to the poet Paul Celan.

By means of his “underlying attitude” and “predisposition” (the Ancient Greeks’ *hexis*) to voluntary self-restrictions that afforded *eutrapelia* (the spirit of joyful sharing within self-defined boundaries), Illich implemented a project aimed at the subversion of university education, with the ultimate goal of shifting it from its usual seat, the classrooms, and setting its centre of gravity in friendly houses equipped with a living room, a kitchen where to cook spaghetti, a good supply of decent wine, and located close to a well-stocked library. The house in Forster Avenue, which owed a lot to the kind of hospitality that Barbara Duden was capable of offering, embodied the very idea of a friendly house.

Faith in the power of conversation

Illich envisaged conversation as the original repository of the birth of the thought. As a distinguished representative of the most refined alphabetic tradition, who was able to read more than ten languages, that utterly alphabetised man was convinced that thought – or philosophy – arose from conversations, i.e., from oral improvisations among friends. As a believer who praised Semitic prophets for their intuition of a conversing God, Illich saw an illustration of the ‘perversion of what is best which the worst represents’ in the progressive disincarnation of the act of reading (the spacing of words on the page after the end of the 12th century, and the page’s growing dematerialisation from parchment to paper, and later to immaterial screens).

A change in the lumen sub quo

During the 1980s, the light under which the topology of the late modern mind could be examined changed. In the 1970s that light had been, or had seemed to be, the light of Reason itself. At that time, the certainties on which our social theorems relied were axiomatic. For instance, the postulate according to which *scarcity* defined certain objects as ‘economic goods’ was the foundation of the laws of economics, and made the adjectives *economic* and *scarce* essentially synonymous. If the law of supply and demand is to preserve at least a modicum of ties to common sense, it must necessarily imply a sense of satiety: supply should thus reduce demand by satisfying it. What is generally observed, however, is in fact the opposite: far from satisfying demand, supply often makes it only worse. Suffice it to consider motorised transport: each new transformation of the urban soil into a road track will in future cause further demand for an even greater number of roads, bypasses, suburban ring roads and elevated highways. Faced with the evidence that supply does not reduce demand,

but actually makes it grow, Illich began to raise questions that were quite different from the ones he was pondering at the time of CIDOC. He began for instance to ask: why do economic goods progressively lose their ability to satisfy the senses? Because economic goods are quantifiable and disincarnated *values*. The senses conversely aspired to wellness, or rather to a kind of “well-being” that was utterly carnal.

One man, two projects

While it is undeniable that there was only one Illich as Thierry Paquot has claimed, it is that same man who was responsible for more than one project! One could for instance mention the two projects listed below:

1. In the 1970s, at the time of CIDOC and Cuernavaca, he developed a project to study the services institutions under the light of reason, a “reason” that was supported by scientific principles. His accurate study of the available data on educational, transport and health institutions demonstrated that they (sometimes) accomplished the opposite of what they promised, and were consequently often *counterproductive*. To take up the metaphor of spindles and weaving looms, criticism (which was often substantiated by studies carried out by the same professionals who sponsored those very institutions) was the criticism of the way certain important concepts were “woven” without taking into account the thread’s nature and the *stuff* of which it was made.
2. In the 1980s Illich began to examine the stuff, the *hylè* (as the Ancient Greeks were wont to say) of which the thread of the conceptual weaving was made. In the same way that each specific region has its own kind of *mud*, each era had its own perception of the primaeval stuff of which its things were made: the soil, the elements of its

material culture, and especially the body and its flesh.

Now that almost seventeen years have elapsed since Ivan Illich's death, what is no longer an instrument but is still called technology is able to generate "non-things" which are made of the stuff's shadow, and which threaten to swallow up in a boundless virtuality all that Illich defined as 'residues of reality'.

To distinguish them from tools, Illich reinterpreted what was conventionally called 'systems.' He argued for understanding systems as those artifacts that provide access to a virtual mode of being. The nature of a virtual mode is as a 'black hole' not only because only a few people understood it at the time but also because of its ability to absorb everything that fell into it, thereby detaching it from every kind of reality and making it *mutterlos* (as he used to say in German), motherless; without a generating matrix. 'Systems' have the pretension to tell us who we are, they shape our perceptions of the world and of ourselves, and in so doing turn us (as well as our flesh and its history) into a functional sub-system. If we accept to be defined as an immune system, then we, and our bodies, will eventually become a sub-system of a worldwide biomedical system.

I cannot conclude this introduction without at least trying to dispel a misunderstanding that is quite commonplace among my French readers and friends. The light under which Illich intended to examine the topology of the modern mind in the 1980s was not the same as the one which he had publicly projected on the counterproductivity of services institutions ten years before. The change in his perspective, nonetheless, had nothing to do with a slip into irrationality. In short: this book endeavours to present Ivan Illich's ideas on those objects that in common parlance are sometimes still known as 'tools', but for which scholars have devised more prestigious categories: Tech-

tics and (under the influence of US terminology) Technology.
Seduced by Technology

We are trapped in the net with which every era tries to snatch pieces of reality and organise them in a coherent image of 'what is real'. Foucault spoke of the episteme of a historical era. After 1980, Illich wanted to study the certainties (made up of concepts and perceptions) that shape the topology of the late modern mind. Since he was a *philosopher of the tools*, he wanted to radically distance himself from the extant consensus on 'what is real in relation to the field of technology', which was of fundamental importance for the episteme of our age. He believed that the combination of the two Greek words *technē* and *logos* (techno-logy) could only be understood in their literal meaning: a discourse (*logos*) on what the Greeks called *technē*, the skills, the art, the stratagem, the contrivance.

A synoptic exposition of the concept of tool

The present book's fourth chapter shall tackle the most complex, hypothetical, and possibly debatable of the reflections Illich made after 1980, which I am going to summarise in 8 points:

1. Under the name of *instrumentum*, a few Scholastic texts of the 12th century introduced a radically new approach to what we now call a utensil, a "tool".
2. Those texts presented the *instrumentum* as a means to implement divine, and later human, intentions.
3. A new type of causality, the *instrumental cause*, was attributed to that new kind of tool; there was a *line of continuity* between the instrumental cause of the 12th, 13th and 14th centuries, and the notion of *productive forces* that emerged in the 19th century.
4. The new tool was no longer either one of the body's organs or an extension of one of the body's organs or limbs. Instead, it found itself placed at a distance from its users'

body, a condition which Illich called *distality*.

5. Distality was *a constitutive element of the relationship* between the tool and its user's hand.

6. The concept of tool afforded a detailed analysis of the nature of the relationship between the tool and its user's hand and body. Conversely, the concept of technology is a veil that concealed this relationship.

7. At the end of the 20th century, that relationship changed to such an extent that the artifacts subsumed under the category of 'Technology' lost the characteristic features of what were once called 'the tools'.

8. The main characteristic feature tools lost when subsumed by technology concerned the fact that the instrumental relationships had *human* intentions.

Illich the historian meant to observe the rise of the tools in the 12th century with his feet well planted in that time, but with his gaze fixed on the present.

Illich did not intend to speak of the change which the civilisation that filled the world with tools is currently undergoing in the same way as did the historians of technology. The latter always tended to do so retroactively, and only took into consideration those elements of the past that had repercussions on modernity. They were solidly rooted in the present, and it was from the present that they turned their gaze to the past, in an attempt to detect what looked like the present and possibly even anticipated it. Illich wanted to do the exact opposite. He wanted to soak himself in the concepts and perceptions of a past age until he could feel he had actually put down roots in it – as far as it was possible, of course. From there, he wanted to turn his gaze to the present. He strove to see the present in light of the past. And he consequently chose the age in which the concept of *instrumentum* was developed.

What did he find in his sources? He found tools, he

found the concept of instrumentality (the adverb *instrumentaliter* in Thomas Aquinas), and he found the concept of instrumental cause. However, he never found the word 'technology', and seldom the word *technē*. All of the above emanated a light that he intended to project on the present. He therefore wished to observe the present time in light of the actual concepts of tool, body, hand, as well as of their potential relationships. The grandiose word 'Technology' did, in fact, the opposite of what Illich intended to accomplish. It was a modern concept which, when projected on the past, made the latter illegible.

The gaze and the alphabet become tools.

This book ends with a chapter on the 'instrumentation' of the gaze (which leads to a vision explained on the basis of the model offered by video cameras), and the 'instrumentation' of the alphabet.

p. 126 | Andre Barone

Untitled (after drawing by Ernesto Bonato), photography, 2023

21,6 x 14,2 cm



Birth and exploitation of common goods in Perugia in
the Middle Ages: the case of the "comunantia fructus water lacus",
of the community of the "Chiugi Perugino"
and of the "pedate del lago"

by Giovanni Riganelli

The issues relating to the birth, management, and exploitation of common goods held by rural communities or cities, are remarkably complex. And this is true even if the period of investigation is limited, as in this case, to only the Middle Ages. Giuseppe Vittorio Parigino makes clear that in late medieval Perugia, "communalities" meant "what in modern financial terminology we would call the original or patrimonial income of the municipality."¹ Accordingly, in his work on the economic history of municipality of Perugia, Giuseppe Mira referred to "income from land and buildings, proceeds from the transfer of fishing rights on inland waters, as well as mint rights."² However, as Rino Fruttini shows, in reality, the "communalities" were also of a different kind in the period from 1400 to 1430. In fact, they also concerned the contract for the collection of the toll, that of the tax on wine, on salt and other products, including that relating to the management of the brothel.³ In 1361 when the land register was

1 GV Parigino, Presentation, in *Common goods and property structures. Dynamics and conflicts in the Tuscan area between the late Middle Ages and the contemporary age*, edited by GV Parigino, Florence 2017, pp. 9-10.

2 G. Mira, *The patrimonial revenues of the municipality of Perugia in the context of the city's economy in the 14th century*, in Idem, *Selected writings of Umbrian economic history*, edited by A. Grohmann, Perugia 1990, p. 170.

3 R. Fruttini, *The "comunanze" in the context of the finance of the Municipality of Perugia in the first thirty years of the century*. XV, in "Bulletin of the Deputation of Homeland

drawn up, there were 58 communalities in the countryside that had common goods. For the most part, these common goods consisted of land, which covered a total area of 1647 *corbe*, 1 *mina* and 23.7 *tavole*, equal to over 2938 hectares, and buildings, of which there were 16.⁴

Having clarified what was meant in Perugia by the term communality, I think it is appropriate at this point to highlight a further, not negligible, aspect: it is the fact that the communalities available to Perugia in normal years – in which no significant events such as wars, famines, and collapse or damage to bridges, roads, and other public works occurred, which were quite rare – managed to cover all the current annual expenses incurred by the Municipality. This, in fact, meant that the city government found itself in the position of not imposing taxes on city residents, according to documents from the beginning of the 13th century.⁵

1. Fishing and hunting at Lake Trasimeno: from *res nullius* to main source of income for the municipality of Perugia

It is therefore now an established fact that except for a few cases, fishing and hunting activities were substantially free in ancient times and in the early Middle Ages. Not only is Lake Trasimeno not an exception but, as attested since ancient times, it seems to have been considerably rich in fish

History for Umbria” (from now on “BDSPU”), LXVIII (1971), File II, p. 15.

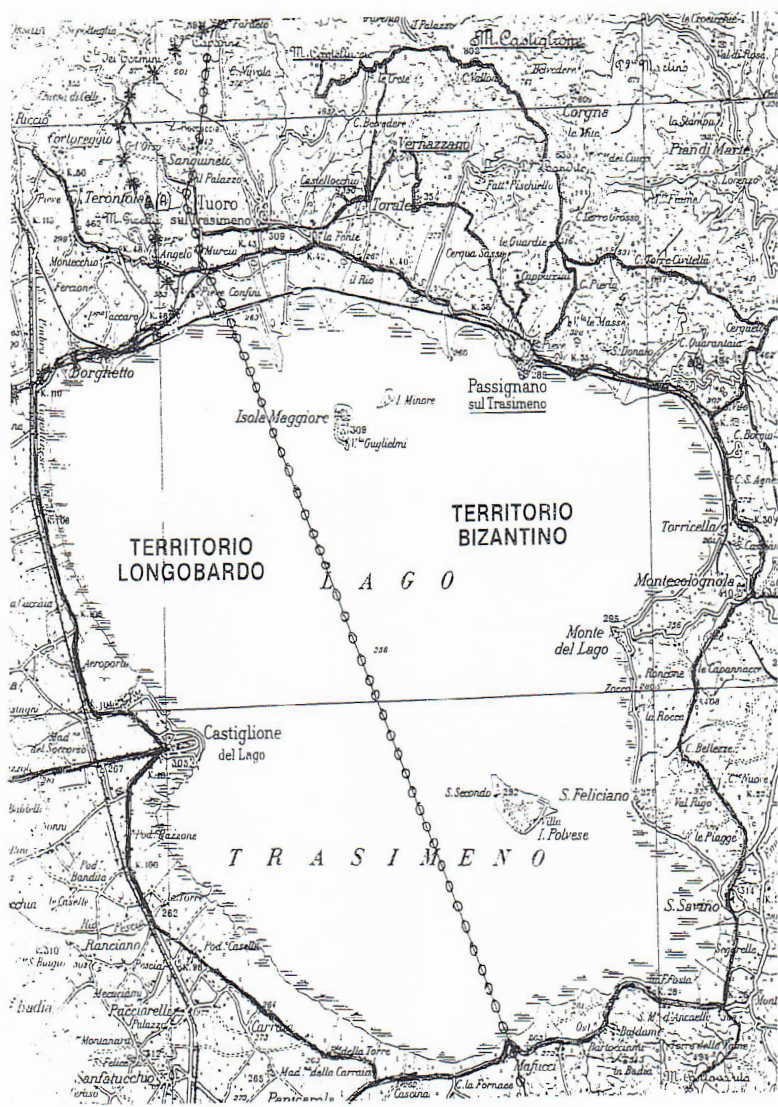
4 S. Tiberini, *Rural communities in the Perugian countryside in the mid-14th century*, in «Annals of the Faculty of Letters and Philosophy, University of Perugia, XXV, new series XI, 1987/1988, 2, historical-anthropological studies, p. 43. Regarding the equivalence between the current measures and those of the medieval era, see A. Grohmann, *City and territory between the Middle Ages and the modern age (Perugia, XIII-XVI centuries)*, I, Perugia 1981, p. 24.

5 G. Riganelli, *Lady of the Lake, Lady of Chiugi. Perugia and Lake Trasimeno in the municipal era (first half of the 12th century – half of the 14th century)*, Perugia 2002, pp. 347-348.

and there must have been many resident and transient water birds that could be caught there. In fact, following what Strabo reports, Lake Trasimeno, which he says is the farthest from Rome and near Arezzo, like the others found in Tuscany, was rich in fish and bird life.⁶ Even during the Byzantine rule, that is between the second half of the 6th and the second half of the 8th centuries, things did not change. Fish and game continued to be *res nullius* (nobody's thing). Moreover, in this period, the lake appeared to be divided in half, with the Byzantines settling on the eastern shore up to and including the three islands –the Polvese, the Maggiore and the Minore –with part of the southern and northern shores, while the Lombards firmly held part of these last two banks and the entire western area. Naturally, there were many fortresses that allowed the defense of these borders and it is enough to mention a few: Castiglione del Lago among the Lombard ones, and Passignano sul Trasimeno and Monte del Lago for the Byzantine ones.⁷ Beyond this question, it is necessary to underline how starting from the defeat of the Lombards by the Franks in 774, the situation in Trasimeno had to begin to change. For instance, already twenty years earlier, the Church of Rome had to dispose of Perugia, which was granted to it by Pepin the Short. However, on an institutional level, not much seems to have changed. When in 817 Ludovico the Pious reviewed the assets belonging to the Roman Church, the western border of Perugia at Trasimeno, was marked by the three islands. This was also the case in the document with which Otto I on 13 February 962, renewed the same confirmation.

6 Strabo, *Geography. Italy, books V-VI*, introduction, translation and notes by AM Birschi, Milan 1994, p. 109.

7 On these and the other fortresses that were located around Lake Trasimeno in that period, see G. Riganelli, *Lady of the lake, lady of Chiugi* cit., pp. 39-45. In fact, the number of fortresses present was greater than that reported here, and I have had the opportunity to highlight this in my work, soon to be published, entitled *Castles, fortresses and towers in the territory of Lake Trasimeno*.



CARTINA N. 2 - Il confine occidentale del ducato bizantino di Perugia.

Legenda

- ▲ (A) - Monte Gualandro
- ▲ (B) - Monte Ruffiano
- - Linea confinaria tra i territori bizantino e longobardo
- ✱—✱ - Confine diocesano (sec. XIV)
- - Viabilità

But something was moving and soon the lake passed entirely to Perugia and, in 997, it was called *Lacus Perusinus*.⁸

Although the lake had entered the entire territorial jurisdiction of the city of Perugia, things in terms of fishing and hunting did not change much, with the possibility for all the communities around the body of water to freely exercise both activities (fishing and hunting). Moreover, the need to cope with the various days of abstinence from meat that Christianity imposed –between Christmas Eve and Lent for about 130 days a year –must have constituted an important factor for keeping fishing free and, with it, also hunting, given that game (captured or hunted animals) was the main basis of animal proteins in the diet of that time.

Nonetheless, already after the year 1000 there must have been those who saw the fishing activity in Trasimeno as a notable source of income, especially considering the distance of the region (Umbria) from the sea (Tyrrhenian and the Adriatic). Among them, there were probably those who supported the noble coterie which, between the 11th and 12th centuries, had settled in Castiglione del Lago and exercised lordship there. In fact, it is no coincidence that in the act of submission by this castle to Perugia in January 1184, it was prescribed that the practice of fishing would be prohibited to those who resided in this community. To reaffirm its dominion over the lake, the city government not only precluded the Castiglione community from sailing on it, but also forbade it to have ports and boats in the lake, ship buildings, and structures for the operation of fishing (*habere aliquod aedificium piscandi cum nave*).⁹ Leaving aside what is strictly connected with the submission of Castiglione del Lago to Perugia, which in fact ended in a definitive and stable manner only

8 Ibid., pp. 46-47.

9 Ibid., pp. 83-87.

in the mid-13th century,¹⁰ the ban on fishing in the lake shows how the city, already in that period, intended to take possession of a right that in fact did not belong to it. This appropriation was therefore achieved by force of arms, given that the Castiglione subjugation was one of the few in which a whole series of armed clashes took place. However, the fact is that already in the beginning of the 13th century, in a document dated 5 September 1209, there is mention of a rector of the lake, a certain Bernardo who, in my opinion, would have been nothing more than a person delegated by the city government for the management of Trasimeno, or rather of fishing in it:¹¹ there was therefore already a {administrative} structure dedicated to it.

However, during the first half of the thirteenth century, after long and lively political clashes between nobles and people over the management of the assets that the Municipality had acquired,¹² a different way of managing this communality took shape: it would be contracted out to whoever would offer the highest sum to acquire, for a given period of time, all the fishing rights to the waters of Trasimeno, which also included the land located on the shoreline, the so-called *pedate del lago* “lake steps”, which were later separated and constituted as a communal resource unto itself. The importance attributed to the management of the fishing activity was such that it not only found ample space in the city statute of 1279 and in the vernacular one of 1342 but was also one of the first contracts or tender specifications –in any case the oldest one preserved –included in the volumes relating to the *Sommissioni* (Submissions), the most prestigious cartulary of the Municipality. Without detailing the individual clauses contained therein, I consider it sufficient to emphasize that those

10 Ibid., pp. 87-117.

11 Ibid., p. 121.

12 Ibid., pp. 117 et seq.

who acquired the aforementioned rights became real lords of the lake and of fishing under the aegis of the city, for the period of ownership.¹³

But over time these contracts were also destined to change and, starting from the 14th century, rights to fowling appear with the fishing rights, though the shoreline land was still treated separately.¹⁴ The great importance attributed to fishing rights in Trasimeno can be easily understood if we consider that, in the last centuries of the Middle Ages, not only was the city market supplied with fish on the over 130 days a year in which one had to abstain from eating meat, but it was also exported to other cities in central Italy including Firenze, Arezzo, Siena, Città di Castello, Todi, Chiusi and other smaller towns. This allowed those who had acquired fishing rights to also collect the toll for fish exported beyond the borders of the Perugian territory. In short, contractors who had started a company generally ended up earning more than four times what they had paid for the contract.¹⁵ What was once free and without constraints had undergone a radical change: not only was the fish now the property of the “state”, but Trasimeno had also become a real hunting reserve. Having documented the transformation of the Trasimeno lake and lakefront from a commons (nobody’s thing) into a property on which fishing and hunting rights were imposed, it is important to highlight how the fountain in Piazza di Perugia – Fontana Maggiore – was largely financed with the proceeds of the contract of this community, although it certainly cannot be ignored that this public good favored the further enrichment of many members of the city’s nobility.¹⁶

13 Ibid., pp. 169-185.

14 Ibid., pp. 191-192.

15 Ibid., pp. 217-218.

16 Ibid., p. 352.

2. The outcome of a violent submission that lasted over time: the expropriation by Perugia of the «Chiu-gi Perugino» lands and the methods of its exploitation

Between the 11th and 12th centuries, in the territory between the Chiane swamp and Lake Trasimeno, a noble coterie composed of various individuals residing in nearby Cortona and in the lake basin ended up exercising lordship. Most of them had settled in Castiglione del Lago and had managed to acquire, to a large extent, the rights to this castle held by the monastery of San Gennaro di Campoleone, the current Capolona in the province of Arezzo. These rights had been granted by Otto III in 997, then confirmed by Conrad II, in 1026 and 1027, by Henry III, in 1047 and by Frederick I in 1161.¹⁷ The submission of the territory west of the lake to the city of Perugia lasted from 1184 until the end of the century and was obtained through the use of force by Perugia, but also fiercely resisted by the Castiglione side. The events that led to this capture marked the birth of a land inheritance for the city of approximately 800 hectares of arable land resulting from the confiscation of assets owned by members of the coterie that ruled Castiglione.¹⁸ Even in this case it was not easy for the Perugian government to consolidate this conquest, above all due to the events that followed one another during the first half of the 13th century.¹⁹

Nonetheless, between the spring of 1251 and the beginning of the following year, the city government arranged to have all the lands owned by the municipality measured and demarcated. On January 25, 1252, a process began to assign the land to those who would have to work it. This occurred

17 Ibid., pp. 42-43 and p. 53 note 123. Regarding the noble coterie and some members of the same, see therein, pp. 65-83.

18 Ibid., pp. 83-98.

19 Ibid., pp. 103-126.

with particular contracts in which the agrarian pact ended up being mixed with the act of personal submission and loyalty to the municipal institution. It was mostly arable land, located largely on the hilly ridge that divides the flat area of Castiglione from that of the Chiane. Alongside these lands, plots were also granted for use as vineyards and vegetable gardens, as well as building areas within the castle of Castiglione. With these concessions, a real nationalization of the territory was achieved which, not accidentally, will be called “Chiugi Perugino” to testify to its ancient belonging to the city of Chiusi and its conquest by Perugia.²⁰ Beyond the issues linked to the name, it is worth highlighting how it was starting from this concession that this large agricultural estate in the city began to be exploited in a systematic way. Such was the economic value of these lands that, during the second half of the 13th century and in the first decades of the following, the company expanded by acquiring more.²¹ It is therefore easy to understand how for this community, between 1252 and 1279, the methods of land exploitation were established and, as in the case of fishing rights, those of contracting out to private subjects. However, in this case the winner was not the one who offered the greatest sum of money, but the one who offered the greatest quantity of cereals, which would then be crammed into the government’s warehouses in the city.²² Like the communality of fishing rights, the procurement of this must also have been a “big deal” and it is certainly no coincidence that, among the contractors, there were prominent figures from the city’s aristocracy.²³

20 Ibid., pp. 127-134.

21 G. Riganelli, *The collective ownership of the «Chiugi Perugino»: genesis and management of the agricultural community between the 13th and 14th centuries*, in *Common goods and property structures* cit., pp. 87-91.

22 Ibid., p. 82. Only in one case, in 1285, alongside the promise of payment of cereals is there also that of a sum of money.

23 Ibid., pp. 91-96.

There are various rules codified in the city statute of 1279 to regulate the management of the community, but also the entire territory of Chiugi Perugino. Those that are relevant to the management of the municipal company are summarized in three articles concerning the agricultural land including the contracts to procure the common good; the forestry-pastoral activity carried out in the woods and on municipally owned uncultivated land; and the protection of wooded areas.²⁴ Beyond such individual regulations, which would take a long time to list, it is necessary to emphasize the fact that it was an ironclad regulation, aimed at safeguarding the heritage available to the city. Anyone who had infringed these rules incurred considerably high fines and, in the event of insolvency, imprisonment. Through a long and violent submission, marked by destruction and probably even deaths, and the confiscation of assets held by nobles, Perugia expanded its territory. An agricultural estate was thereby born which allowed it to have sizeable quantities of wheat, barley, and spelt annually, with which to cope, at least in part, during the lean years.

3. The “steps of the lake”: the birth of the community and the relationships between contractors and growers of the same

Another agricultural community present around the lake basin was that of the “lake treads” or shoreline lands to which reference has already been made. This was related to the shoreline terrain and indicated that relatively large, marshy area with intense vegetation and without trees. These lands, or at least part of them, were the result of a confiscation from the so-called *Lacoschiani*, meaning those who lived around Lake Trasimeno were called, during the events that marked the sub-

24 Ibid., pp. 81-91.

mission of Castiglione del Lago at the end of the 12th century. They were located in the area of San Savino, in the area between Tuoro and Passignano di Tuoro as well as near Monte Gualandro and, until the end of the 1380s, they were contracted out together with the community of fishing rights, although there were exceptions. These lands are recorded in the minutes of the city council of 10 July 1269, a period in which they had been contracted separately from the other given that in late spring or early summer when the buyers of the fruit obtained from the treads of the lake owned by the Municipality of Perugia (*emptores fructuum pedatarum lacus comunis Perusii*) presented a petition to the city government. It was pointed out therein that the shoreline lands had been occupied by those who had properties bordering them, while some parts no longer had the boundaries between the municipal lands and those of private individuals as they had been removed. A further attempt to make these lands a separate community occurred at the beginning of the 1280s, when the fishing rights were contracted out separately from those for the lake treads. But even in this case the limited proceeds that were to be derived from the contract by the city municipality had to determine their reunion in the second half of that decade. But the time was ripe for a definitive separation which probably took place during the last part of the 13th century or in the very first years of the following one, when Trasimeno was also made into a hunting reserve, with the period of this transformation to be ascribed to that between 1290 and 1302.²⁵

The terms of this common good was not comparable to that of the fishing rights and that of the Chiugi Perugino. On 10 December 1311, it was contracted out for a decade, starting from 1 May of the following year, for a total of 7,000 lire of small Cortonese denarii. The sum, in the ten-year contract stipulated in 1321, increased and the community was

25 G. Riganelli, *Lady of the lake, lady of Chiugi* cit., pp. 317-320.

sold for 10,000 lire of denarii. Beyond the price paid by the contractors to win it, I think it is important to see in detail what the contractor ended up acquiring with the rights relating to these lands. He and his partners could take the lands away from those who worked them and assign them to others and those who worked them had to give them what was due to the city, generally a third of the fruits. As noted in the same contract, the contractor and his partners held this property in lieu of the city government and were given the ability to act as if it were their property. The city would not have harmed the rights of the contractors in any way and, if it had done so, it would have taken steps to resolve any dispute, also specifying that the assets granted were free from any restrictions and were not occupied by anyone. The contractors, during the stipulated period would be defended by every man and every community at the expense of the city government.²⁶

Among the clauses contained in the contract there is the possibility for the contractors to take away the lands from those who worked on them to rent them to others which seem to be in contradiction with what is contained in the city statute of 1279. In it, Article 234 specifies how the fruits of the water and of the treads of the lake, together with the land of the islands, had to be sold (*Qualiter fructus aque Lacus et pedatarum vendantur cum terreno insularum*). It is written therein that the men of the lake had to take care of the cultivation of the treads without malice, as had been customary (*de Lacu sine malitia, sicut est hactenus consuetum*).

The buyers of the shoreline lands of the lake (*emptores pedatarum Lacus*) could however lease the hard and uncultivated lands of the same lakeshore lands to others whenever they wanted and receive from the lessees what they had

²⁶ Ibid., pp. 323-324.

agreed upon.²⁷ In the space of thirty years or so there was an evolution in the management of this community, conferring greater power on those who acquired the rights to exploit it. Being able to rent land at will is, in my opinion, a way to put pressure on farmers under the threat of exclusion from cultivating the land. But the exercise of this “power” regarding the sharing of the lakeshore land from which the owners benefited until well into the twentieth century, had a short life due to the disappearance of this common good during the fourteenth century. The “steps of the lake” were, in fact, no longer present as a city heritage since 1400, at least according to what was reported by Fruttini.²⁸

27 *Statute of the municipality of Perugia of 1279*, I, Text published by S. Caprioli with the collaboration of A. Bartoli Langeli, C. Cardinali, A. Maiarelli, S. Merli, Perugia 1996, pp. 231-232.

28 R. Fruttini, *The “communities” in the context of the finance of the Municipality of Perugia* cit., p

Imagination lost: crossing the third watershed

by Neto Leão

Preamble

Ivan Illich is a classic. We often approach great thinkers of the past from two opposite yet related roads: assuming they are either determined by their historical period and therefore outdated, or as timeless geniuses. Both approaches, however, are blind to what are a classic and an oeuvre. A classic has something to always tell us because they respond to fundamental questions. A classic also teaches coming generations to raise the meaningful question of their own.

Illich's thoughts are neither old nor timeless. I suggest that Ivan Illich's oeuvre corresponds to a classic because it opens a new field of ideas in which we can find paths of our inquiries. By reading Illich, I have been learning the rigorous craft of raising good questions and how to confront my own time. I believe he is as current as he once was because many of his questions have not been widely confronted and some have been completely ignored, though most of his arguments are still potent provocations to radical thinking that is unafraid to go to the root of things.

My reading of Illich has taken me on a journey of listening to his words and engaging deeply with what he has to say. This intimate relation has crafted the feeling of visiting the interior of his speech that has still something to say despite its distance from my time. But it is this very historical distance that, little by little, allows me the exercise of reflection, from which emerge questions and propositions that are not those of the author. It is precisely at this moment of clear

distance that his voice finds a greater strength and is capable of evoking new questions that are now mine.

Among his oeuvre, *Tools for Conviviality* (1973) is perhaps the book, or pamphlet as Illich called it¹, most known to the public. It is the one with the highest number of publications in other languages (including Portuguese, my mother tongue, which is a language yet unknown to most of Illich's works). *Tools for Conviviality* is a classic. Fifty years after its debut, it still has something to tell us.

The 1970's are over. Many if not most of Illich's propositions in *Tools* had their place, a proper *topos* at that time. Today, they would mostly be misplaced. Politics, dialectics, and large scale social-ecological changes do not ink any of the pages of Illich's works after the 1980's. Illich himself stated, in a conversation with David Cayley, that "in *Tools for Conviviality* I came as close as I could to establishing some principles for possible political action around 1972. Do I expect to do better today [1992]? No. I then believed in the possibility of a true flipping in consciousness, of which I spoke at the end of *Tools for Conviviality*. Today I fear that many of the things which made me believe in this have changed."²

According to Illich himself, *Tools* can no longer establish some principles for political action. Yet, I argue that it has something to tell us, which I hope to demonstrate in this paper. I take the opportunity of the fiftieth anniversary of *Tools for Conviviality* neither to celebrate a brilliant book nor to romanticize a brilliant mind. I do not intend to lament the loss of its power to change society, or to elaborate a "solution" to the current crises, but to help us see how deeply technology

1 "I first wrote on a general theory of tools in a pamphlet, an essay. I wanted to revive the art of pamphleteering on the intellectual level. I didn't want to write social criticism or philosophical reflections. From the beginning, I said I wanted to write a pamphlet which would make people discuss the question. So I wrote *Tools for Conviviality*." (David Cayley, Ivan Illich in Conversation, Anansi Press, 1992), p.108

2 *Ivan Illich in Conversation* (p.115).

can shape our minds, souls, and bodies. And maybe, and this is a big maybe, to find room to regain an imaginary space for thinking, that ultimately shapes our way of living.

It had something to say

During the late 1960s, Illich's seminars at CIDOC were centered on educational devices. They were critical studies of the radical monopoly exercised by the industrial mode of production. By 1970, they found that universal education through compulsory schooling is not possible; that mass education is the large-scale conditioning of consumers and workers fitted for modern societies; and thus, only a society highly committed to levels of shared learning and critical personal commitment could set pedagogical limits on industrial growth.

Accordingly, his analysis of schooling and mass production of education – a service commodity organized as public utility and thus defined as a basic necessity – became the paradigm for other industrial enterprises. General analyses both then and now has well-formulated limits to the industrial growth of commodities but has been mostly blind to the industrialization of services and its destructive side effects. In contrast, Illich's pamphlets (*Deschooling Society*, *Tools for Conviviality, Energy, and Equity* and *Medical Nemesis: the expropriation of health*) not only show the catastrophic side effects of the industrialization of services but also called for political engagement with technology by setting limits to it. Only when the production of goods and services are jointly analyzed is it possible to clarify the limits to industrial growth.

His analysis is founded on an alternative concept that Illich called multidimensional balance, the framework for evaluating man's relation to his tools. When tools—whether medicines or machines—grow beyond a certain scale, they frustrate the end for which they were initially designed. Take

the example of cars in big cities. Although designed to increase mobility, most idle for hours in unavoidable traffic jams. Illich proposed two fundamental criteria for such analysis: identification of the natural thresholds and their social limits within which human life remains viable.

When Illich published *Tools for Conviviality*, he noted that two-thirds of humanity could still avoid passing through the industrial age if they had directly chosen postindustrial balance in their mode of production. In the early 1970s, Illich was aware that hyper-industrial nations would be forced to choose such postindustrial balance as an alternative to social/environmental chaos. He was writing it during a time of the energy crisis—a term he seemed to have coined in *Energy and Equity*. It was clear to him that further growth of mass-produced services and goods would make the human milieu hostile to its flourishing. Such accelerated growth inflicts social and natural changes at a rate that destroys cultures, renders political precedents powerless, and damages the physical milieu of man. In the social sphere, it means, for instance, extinguishing the unrestricted use of natural abilities. The ability to walk is given naturally by the form of our bodies. The growth of industrialized transportation not only pushes the walker off the streets but, in most cases, also makes it impossible for her to walk safely. In this way, locomotion becomes a scarce resource, a paid public or private mode of transport.

In this sense, it is entirely irrelevant whether an enterprise which produces such destruction is public or private, cooperative, or communal. In other words, it is not a question of ownership or of style of management. Market economies or planned economies, for instance, under such monopoly mode of production, generate similar levels of social and ecological degradation. Illich's theory argues for restraining the power of tools whenever they tend to overwhelm human activity.





p. 144, 155 | Andre Barone
Untitled (after drawing by Ernesto Bonato), photography, 2023
29 x 16,3 cm, 21,6 x 14,2 cm

In this sense, empowerment comes from understanding that beyond certain natural scales and limits, machines lead to a new kind of serfdom, whereby humans serve their machines. I believe that such a 'General Theory of Industrialization' is a milestone in the analysis of late modernity.

The challenge at that point was to recover one's imagination and fathom a modern yet industrially balanced society. In Illich's words, "our vision of the possible and the feasible is so restricted by industrial expectations that any alternative to more mass production sounds like a return to past oppression or like a utopian design for noble savages". Against such conditions, Illich formulated his concept of counterproductivity, composed of three dimensions: technical, structural, and symbolic. For example, the technical one implies that a car made for transportation cannot move due to congestion – overwhelmingly high numbers of the same tool sharing a limited space. When I am pushed off the streets to the extent of literally having no way to walk from one place to other marks the condition of structural counterproductivity. The deformation of self-perception as a *homo transportandus*, a being who needs locomotion, marks the third and most damaging consequence of the radical monopoly imposed by transportation. Understanding oneself in the light of what dominant tools says of oneself is its most degrading effect.

How to feasibly think of a theory of society that is both very modern yet not dominated by industry? That was the central question of Illich's critical research of modernity. The answer connects the social to the environmental, perhaps what is now known as environmental sociology *avant la lettre*.

In 1973, Illich's answer to this question came from an understanding that humanity had been facing a crisis, a moment of pivotal decision. Either the extraordinary scientific discoveries of the last decades would narrow and domesticate people's activities into the specialization of functions, or

a possible and feasible alternative would enlarge the range of each person's competence. The first defines industrial society for Illich: the institutionalization of values and centralization of power, and people are mere accessories of bureaucracies. The second inverts the first structure into what Illich named a 'convivial society.'

Above all, a convivial society is formed by the shape of tools that are in accord with natural thresholds. For Illich, dominant technologies are outsized and serve the purposes of managers in an industrial society. A society gradually becomes convivial when politically interrelated individuals set limits to the use of outsized tools. In this sense, "convivial is a technical term to designate a modern society of responsibly limited tools." That is why the term is applied to tools rather than to people. Therefore, a shared house, is not necessarily convivial, although people are 'living with' one another. What determines a convivial society is the relation between people and their tools and the extent to which this relation sprouts new communities.

Illich retraced a classical way to understand interrelated individuals acting together in pursuing a balanced society: Aristotle's *eutrapelia* and Aquinas' *austerity*. The first could be understood as 'pleasantness in conversation' while the second as 'discipline and creative playfulness.' These are the foundations of friendship. When we hear of austerity, however, we think of a neoclassical political-economic fiscal policy defined by 'responsible' spending cuts of government expenditures. Austerity has vanished as "the fruit of an apprehension that things or tools could destroy rather than enhance *eutrapelia* in personal relations." Both virtues do not exclude all enjoyments, but "only those which are distracting from or destructive of personal relatedness." Each society must find and set the limits to meet the appropriate balance that avoids destroying what creates the condition to encounter the other.

Illich's radical critique of modernity included the loss of pleasant conversation because of both the social and environmental degradation in an industrial society. He was looking at not only the biological or social degradation caused by dominant tools but also the conditions needed to regain the fabric of the community in relation to its milieu through disciplined and creative personal engagement or friendship.

The crossing of two watersheds

In modern industrial societies of the 20th century, Illich argued for identifying two watersheds in advance of new technologies. The first occurs when a new tool enables many people to access, use, retain or enjoy its effects and new possibilities. The second occurs when this new technology grows beyond social and natural limits to create new problems it initially intended to solve. In other words, the scale of the tool disables the abilities once enabled by it.

Let us take the example of cars once again. In the late 1920s, a car mechanic and general Mr. Fix it named Mario Fava, a former inhabitant of Pederneiras (a town 50 km from my village), left his mother on a journey to which he had just been invited (he was chatting with two military officials, who had been abandoned by their mechanic while fixing their Model T). They left the State of São Paulo carrying the travel permissions from the Brazilian government, crossed 15 countries of the three Americas, helped to construct significant sections of the Pan-American Road, traveled a total of 27,631 km, and arrived at the Oval Office, Washington DC ten years, one month, and nine days after they began their journey.

In 1940, when Mario Fava returned to his mother's doorsteps, while the world was being shaped by this new technology, she was flabbergasted by his presence. Her first words: 'what took you so long?' His answer, which names one of the

books dedicated to his adventure, was, "I did not know it was so far away." Mario Fava also did not know that he was witness to a period in history in which cars, the new tool for human locomotion, were about to cross the second watershed.

Cars, along with the transportation industry more generally, had rapidly reached a scale that produced the very disease they were supposed to cure. Work, social life, politics, learning, healing, and leisure were pushed off the reach of one's feet. A person's ability to move was disabled by the environment created for and shaped by the transportation industry. In this way, professional transportation became a significant threat to transit.

To live constantly within the second threshold generates such a level of disability that people become immersed in frustrations. Illich thought that such frustration would prompt fresh perspectives. To end the frustration, we must first destroy illusions. Crossing the second watershed results from a society sustained and infected by the growth mania. When the sense of proportion is destroyed by the ever 'more' and the 'never enough,' people become blind to a solution rooted in communally established limits and confuse the idea of ceilings to industrial growth with a return to pre-industrial oppressive society. For this reason, Illich proposed a convivial reconstruction to reverse the primary trend of the 1970s so that modern science and technology could be used to "endow human activity with unprecedented effectiveness."

The relationship between what people can do by themselves and what they need to obtain ready-made is perturbed by what Illich calls over-efficient tools, which ultimately destroys the balance between the active man and the passive consumer. The crossing of the second watershed, therefore, produces what Illich calls radical monopoly.

Let us take the example of transportation once again. Cars can monopolize traffic by shaping the cities into their

image and ruling out locomotion on foot or by bicycle. Built in the late 1950s, Brazil's recent capital, Brasília, is the ideal type of a city shaped by gasoline-fueled vehicles. Although located in a vast flat territory, no lines of the original drawings of the urbanist Lucio Costa and architect Oscar Niemeyer were meant for people on foot or by bicycle. The large blocks and long high-speed highways were designed for cars. There are no sidewalks in most parts of the city. Transportation not only becomes dangerous and costly, but such overland radical monopoly also creates long distances which only cars can reach (slowly). The space becomes scarce, and the environment is unavailable for persons' innate mobility. "Green" buses and "green" cars, and "green" constructions, under these conditions, produce the same result and effect.

Therefore, a radical monopoly exists when a significant tool rules out natural competence, imposes compulsory standardized consumption, and restricts personal autonomy. People's native capacity to do by and for themselves and others – moving, healing, consoling, building, burying their dead – are made scarce.

The radical monopoly of large-scale tools produces two cardinal social effects: social polarization and obsolescence. In the first, people are systematically excluded from industrial inputs and outputs, while in the second, life becomes intolerable even when people are not directly excluded from them. Progress is grounded in one fundamental idea: innovation of never-ending and progressive consumption (of products and services). New necessities always endow new scarcities. What is new translates into an important privilege.

Peasants in my village are being pushed out of the paths their horses trot on by tar pavement built for big trucks. Only very few privileged men are driving through these new roads with their new trucks. The villagers do not wish to own a truck—their lives, memories, and perception are strictly re-

lated to those paths taken at a different pace. When anything new is proven to be “better,” the social grading of individuals is based on the age of the things they use. To ride a horse becomes the symbol of a new mark of “poverty.” The commitment to the paved road and its monster trucks makes horse riding impossible, and the benefit of a few men devours the milieu that once carried the marks and memories of several people. The accelerating change of progressive new models drains the waters of memories, rips out the shared roots of *savoir-faire* (know-how), and upsets the balance of tradition. Ultimately, it teaches that “the better replaces the good as the fundamental normative concept.” A society caught up by the spell of ‘better’ perceives any invitation to celebrate life within limits as a threat.

The third watershed: it has still something to say

When Ivan Illich recognized the existence of two watersheds that every tool crosses within a society, he was aiming for the flourishing of convivial societies. Aware that natural thresholds are generally crossed after social limits are breached, he identified two watersheds: the first watershed is crossed when new tools enlarge people’s welfare in an efficacious way, while the second is crossed when some tools grow beyond a certain scale and begin to act against the very purposes they were meant to achieve.

Illich referred to the double phenomenon of social-environmental degradation with the term counterproductivity. As abovementioned, counterproductivity is of three kinds: technical, structural, and symbolic. Ultimately, the three dimensions of counterproductivity increase uninterruptedly. In such circumstances, frustration rapidly transforms into madness (Hades ultimate punishment); our modern industrialized societies perform the labor of Sisyphus with the lunatic and futile expectation of regaining the lost balance by rolling

different boulders through the same path. To believe that, for instance, electric cars are a solution to the current social-environmental degradation is to engage in a Sisyphean task.

Sisyphean modernity is generated by symbolic counterproductivity which refers to the phenomenon of self-perception or understanding generated by long exposure to outsized technologies. People habituated to sitting in cars, for example, think of themselves as beings who need to be moved, as *homo-transportandus*. It means that our imaginary space has been utterly shaped by dominant technologies and systems to the extent in which we lose our imagination to fathom alternatives.

I suggest the notion of a third watershed as the point at which symbolic counterproductivity becomes so entrenched that it can no longer be perceived as such. Overusing a tool designed to ignore natural thresholds cements the symbolic counterproductivity to the extent that it becomes the object of veneration. In other words, the damages caused by excessive technology are sought to be remedied by more technology. It is a sign of crossing the third watershed when society believes that electrifying the means of mass transportation is a solution to the problem of too much transit.

The symbolic dimension of counterproductivity entails the loss of the imaginary space and, consequently, the capacity to imagine alternatives to technological excess. After decades of living under symbolic counterproductivity, the third watershed becomes the “new normal”. That electric cars are thought a solution to climate change occurs only after walking is understood as a mode of transportation. Instead of politically addressing the issue of too much energy, sustainable development seeks solutions in living under the same power dependence (no limits to energy or tools) while expecting solar energy, for instance, to save us from both limits and ecological devastation. Ozzie Zehner has shown that shifting

from fossil fuels to the chimera of clean energy is a result of what I am calling the crossing of the third watershed, when the tool becomes a system. Suppose every country, above all the ones that pollute the most, agrees on shifting to clean energy starting today without any commitment to setting limits to energy consumption: “a global solar program would cost roughly \$1.4 quadrillion, about one hundred times the United States GDP. Mining, smelting, processing, shipping, and fabricating the panels and their associated hardware would yield about 149,100 megatons of CO₂.”³

Solar energy can only become a genuine alternative when it is framed by conviviality. To promote a planetary shift to solar panels under the sustainable development rubric is to insist on unlimited growth. Sustainability is the engine that confirms that societies are crossing the third watershed. In this third watershed, tools become systems that cannot be shut down. In Illich’s words, a system is “an extraordinary complex arrangement of feedback loops. The fundamental characteristic of a system is to seek survival by maintaining an informational balance which keeps it viable.”⁴ The fact that we cannot fathom a society living within limits to energy and instead have been committed, for the last thirty years, to sustainable development, that is, to have unlimited but cleaner energy, exemplifies the inability to put down our tools. We cannot conceive ourselves separated from the electric current.

In the 1980s, Illich had already seen the shift from the Age of Tools to the Age of Systems. He identified the Age of Tools as one of the *causa instrumentalis* – an unintentional cause – a subcategory of the Aristotelian notion of the *causa efficiens*. Such notions compose the clear separation between

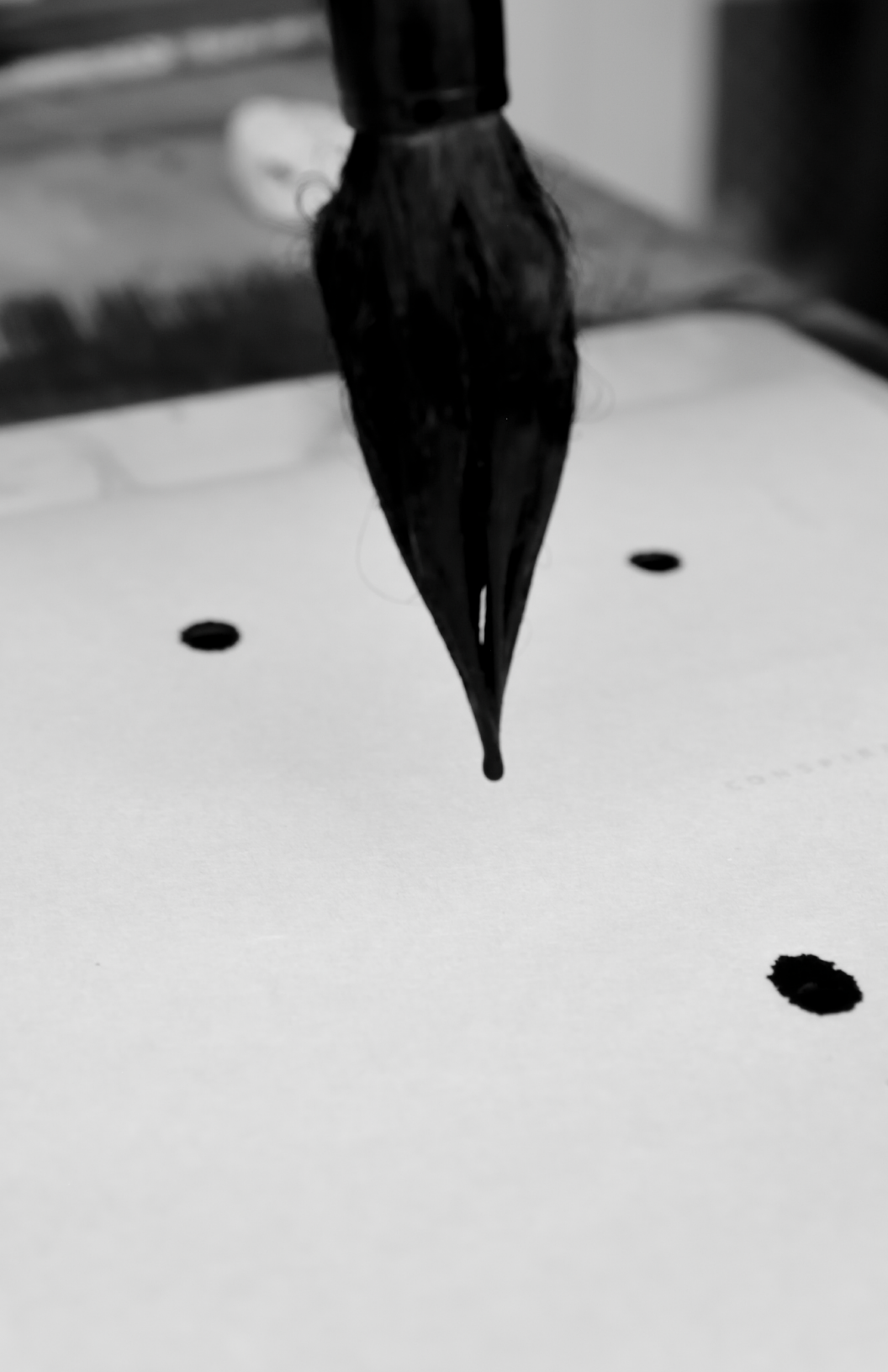
3 Ozzie Zehner, *Green Illusions: The Dirty Secrets of Clean Energy and the Future of Environmentalism* (University of Nebraska Press, 2012), p.9.

4 David Cayley, *Rivers North of the Future: the testament of Ivan Illich* (Toronto: Anansi Press, 2005), p.204.

the user and their tool (to better express human intentions). To this clear separation, Illich gave the name of distality. In other words, a tool is something one can only conceive apart from oneself, something one can or cannot use.⁵ When I take melatonin as a sleep aid to combat the exhaustion from hours of writing in front of the computer, I act from what I feel. But when I take Prozac to shut down my system because of the risk of compromising my immune system, I act as a sub-system within a system. In this frame of thinking, there is no possibility of doing or not doing something.

Crossing the third watershed is reflected by the age of systems when our imaginary space has been shaped by counterproductivity to such an extent that we cannot see alternatives to social and ecological degradation outside unlimited tools, unlimited scarcity, and unlimited property because we are incorporated into systems. Renouncing the system and regaining conviviality is a far more radical political task than any political proposal agreed by nations at the last thirty years of environmental summits. How to regain an imaginary space? *Eutrapelia* and austerity, Illich's core principles for a convivial society, remain as current as they once were. That probably means we will not save the world, but we might regain the art of living together.

5 *Rivers North of the Future*, p.158.



Imitation Games: when who you are is reduced to what you do

by Nicola Labanca

In 1950, Alan Turing devised what he called an imitation game to test if a computer could imitate a human. The imitation game has since come to be called the Turing Test and is understood as a test of whether a human being asking questions can tell the difference between answers received from a computer and a human.¹

The recent release of the generative pre-trained transformer (GPT) chatbot called ChatGPT has sparked a public discussion on the difference, if any, between machines and men. For the most part, the debate on these and other Artificial Intelligence (AI) applications resembles those that accompanied the introduction of previous technologies like the smart phone—mostly confined to a discussion of the societal benefits and costs of a new technology.² However, the one element of AI that is distinctive is the claim that it could mimic human intelligence, particularly with the fabrication of an artificial general intelligence (AGI).³

Turing's imitation game was designed to test if computer responses to natural language questions could mimic those of a human. I argue here that our societies have now

1 For further information about the Turing test, see e.g., https://en.wikipedia.org/wiki/Turing_test

2 See e.g., McNamee, R. (2023). "There is only one question that matters with AI." *Time*. Online article available at <https://time.com/6268843/ai-risks-democracy-technology/> or Eloundou, T., Manning, S., Mishkin, P., Rock, D. (2023). *GPTs are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models*. (Ithaca: Cornell University Press). <https://arxiv.org/abs/2303.10130v4>

3 For further information on AGI, see https://en.wikipedia.org/wiki/Artificial_general_intelligence.

begun imitation games that go well beyond the Turing test.⁴ The social imaginary forming around AI clearly exceeds the simple difference between human and machine answers to questions. It presumes and encourages an on-going process of symmetrization between material artifacts, humans, and animals—whether this concerns their internal workings, what they can produce, and even their moral status.⁵ Such symmetrization has far-reaching implications, some of which I explore in this article.⁶

The social imaginary of AI is being enacted by scientists and laypersons through rituals that assume these technologies could become bearers of human desire, thoughts, and feelings.⁷ When they are taken literally, these ritualized acts blind people to how their interactions with artifacts produce unwanted consequences. Towards the end of his life, Ivan Illich discerned a transition in Western culture and thought from the “instrument” to the “system” sometime during the late 20th century.⁸ Following his insight, I will argue that AI does not belong to the category of a tool or instrument or technology. Rather, to understand AI as an exemplar of a system, I start by referring to the Aristotelian understanding of action and its relation to potential. I then suggest that this relation underwent a decisive change when the “instrument”

4 Biever, C. (2023). “ChatGPT broke the Turing test – the race is on for new ways to assess AI.” *Nature* 619, 686–689

5 See e.g., Liao, S. Matthew (2020). “The Moral Status and Rights of Artificial Intelligence,” in S. Matthew Liao (ed.), *Ethics of Artificial Intelligence* (New York, 2020; online ed, Oxford Academic, 22 Oct. 2020) or Wojtczak, S. (2022) “Endowing Artificial Intelligence with legal subjectivity.” *AI & Soc* 37, 205–213

6 In the last section, I briefly discuss studies of science and technology inspired by Bruno Latour premised on the symmetric treatment of man, machine, and animal.

7 See e.g., Chalmers, D.J. (2023). *Could a Large Language Model be Conscious?* (Ithaca: Cornell University Press). arXiv:2303.07103

8 Cayley, D. (2005). *The Rivers North to the Future. The Testament of Ivan Illich as told to David Cayley*. (Toronto: House of Anansi Press), Ch. 4

emerged as a category in the 12th century, which also changed the very nature of both human action and human potential. Over the age of instruments, the scope for human action to be delinked from human potentiality vastly increased, in proportion to the expansion of large-scale technologies. However, the emergence of cybernetic system science in the mid-20th century further and fundamentally altered their relation and their nature yet again. I argue that this alteration is the outcome of the idea and design of systems, which is predicated on the claim that purposive behavior can be equated to negative feedback loops, and that men, animals, and machines are therefore similar from the scientific point of view. Crucially, conceptualizing purposive behavior with the logic of feedback loops removes action from the sphere of human potentiality. Instead, humans are reduced to the outcome of circular actions—they are what they do within negative feedback loops. AI is imagined as human only because the cord between an original human potentiality and human action has been cut through described transformations. When humans are understood as no more than action within negative feedback-loops, they lose the potential to be forgiven or redeemed and are no longer accountable for what they do.

The intrinsic contradiction of Instruments

AI is still often imagined as an instrument. Instruments or tools or technologies are widely understood as means designed to achieve specific ends. They are devices thought to exhibit a degree of autonomy but in a way that allows them to be controlled by their users. This intrinsic contradiction is widely accepted. For example, all guns are designed to fire bullets (its autonomous ability) but what they shoot at is dependent on the shooter (its dependence). In this section of the article, I will show that such an instrumental understanding of equipment emerges in western imaginary around the

12th century; that it represents a mutation of an ancient view of the slave in Greek thought; and that this long history has shaped the supposed similarity between early forms of AI and human characteristics.

The intrinsic contradiction of so-called good and old-fashioned AI (GOF AI)

The best approximation of the technological rituals and myths shaping AI as an instrument is *symbolic AI* which dominated research and development in that field from the 1950s to the 1980s.⁹ Symbolic AI is also called good and old-fashioned AI (GOF AI) because it is based on human-readable representation of problems through symbolic reasoning and logic.¹⁰ It is typically programmed through if-then rules and statements that establish relationships between inputs and outputs. It produces such applications as expert systems, automated theorem provers, planning and scheduling systems, and so on. Symbolic AI is meant to be totally transparent. Accordingly, its developers can inspect the logic behind the machine's decisions by following the instructions line by line and investigating its errors down to the most minimal details of the code. Symbolic AI therefore offers a paradigmatic example of digital artifacts programmed for any end-user to produce outputs from the feasible class. However, in so far as it is thought to exhibit a kind of autonomous intelligence, symbolic AI is also supposed to enable the generation of specific outputs beyond the ability of the programmers or the users. In this sense, GOF AI contains the intrinsic contradiction characteristic of all instruments. By investigating the historical roots of the idea of an instrument, we can appreci-

9 Haugeland, J. (1985) *Artificial Intelligence: The Very Idea* (Cambridge, MA, MIT Press).

10 On this, see e.g., Boden, M. (2014). GOF AI. In K. Frankish & W. Ramsey (Eds.), *The Cambridge Handbook of Artificial Intelligence* (pp. 89-107). (London: Cambridge University Press).

ate how symbolic AI came to be thought of as an instrument endowed with its own intelligence.

The slave as an animate instrument

Ivan Illich sketched an original and insightful account of the historicity of the instrument.¹¹ Deepening the idea that the instrument was not a ahistorical given, Giorgio Agamben showed that the idea of a means that can be employed to achieve specific ends took hold about eight centuries ago and further that the intrinsic contradiction of instruments was rooted in the ancient understanding of the slave as an *animate instrument*.¹² Agamben focuses on one of the three types of relationships that define a family in Aristotle's *Politics*: the despotic relation between master and owned slaves.¹³ Aristotle defines the slave as a being who "while being human, is by its nature of another and not of itself." To justify the necessity of despotic command among animate beings Aristotle relies on analogies with inanimate things. Whereas some instruments are inanimate—like the shuttle used to weave or the plectrum to play the lyre, others are animate—like the lookout person in a ship. The slave serves as an exemplar of instruments that, by definition, *cannot* accomplish their proper work by anticipating the will of others. To contrarily admit the possibility of autonomous will in slaves would be like admitting a shuttle could weave cloth by itself or a plectrum could play the lyre.¹⁴

11 See Cayley, D. (2005). *The Rivers North to the Future. The Testament of Ivan Illich as told to David Cayley*. p. 171 and Heron, N. (2017). *Liturgical Power: Between Economic and Political Theology*. (New York: Fordham University Press). Chapter 4.

12 Agamben G. (2016). *The Use of Bodies*. (Stanford: Stanford University Press), chapters 1 and 7.

13 Agamben refers to Aristotle's "three types of relations [that] define the family: the despotic (*despotikē*) relation between the master (*despotes*) and the slaves, the matrimonial (*gamikē*) relation between the husband and wife, and the parental (*technopoietikē*) relation between the father and the children." See *ibidem*, p.3.

14 *Ibidem*, p. 10

According to Aristotle therefore, the master's despotic command over slaves is as natural as that of the soul making use of the body as an instrument or the musician using the plectrum to play the lyre.

Agamben invites the reader to go beyond simplistic criticisms of this view of slavery and to focus on the context in which Aristotle inscribes the question of slavery. Agamben wants to expose the “zone of indifference between the artificial instrument and the living body”¹⁵ in which Aristotle situates the body of the slave. The contradictory character of *animate instrument* was originally attributed by Aristotle only to specific types of humans (i.e., slaves) and *not* to their tools. By extending Illich's studies, Agamben proposes the fruitful hypothesis that this hybrid character of animate instruments—at once both animate and inanimate—may have migrated from slaves to the *instruments themselves* by the 12th century. This migration could then explain how, while remaining under the command of their masters, instruments, including symbolic AI, could be understood as exhibiting some kind of autonomy and intentionality. For this reason, Agamben emphasizes the “constitutive connection between slavery and [modern] technology.”¹⁶

How the rise of instrumental causality equates technology and slaves

The tools that people employed during their everyday life did not receive a lot of attention from ancient philosophers. Hammers, swords, wood, and forges did not have a general category under which they could be subsumed. Illich reminds us that ancient Greeks referred to their tools by employing the term *organon* in a way that did not allow distinguishing between the hammer, the arm holding the hammer, and the

15 Ibidem, p. 23.

16 Ibidem, p. 79

action of hammering.¹⁷ In this sense, tools were not conceptually separated from their users.¹⁸ It is only starting from the 12th century that instruments acquired an independent status by becoming the carriers of a new and special subtype of efficient causation that theologians named *causa instrumentalis*. Following Agamben, I suggest it is the notion of an animate instrument that represent the signifier for conceptualizing instrumental causality and thereby constitutes the connection between the ancient slaves and modern instruments.

Agamben and Illich emphasize it was Scholastic theology which developed the theory of the instrumental cause in the doctrine of the sacraments.¹⁹ The idea of *causa instrumentalis* has been first formulated by Aquinas when describing the role of the celebrant and of the material elements (e.g., water, consecrated oil, etc.) employed in the administration of the sacraments. Aquinas emphasized the function of the sacrament as conferring grace. God is the primary cause for the efficacy of the sacrament, but it produces its effects by means of another element which acted as a secondary instrumental cause. It is worth noticing here that instrumental causality is ascribed not only to the employed material element but also and primarily to the celebrant or minister himself. Whilst the material element participates as an inanimate instrument, the minister participates as an animate instrument. Both instru-

17 See Cayley, D. *The Rivers North to the Future*. p. 172, but also Agamben G. *The Use of Bodies*. p. 13

18 In the *Eudemian Ethics*, Aristotle argues that: "the relations between soul and body, artisan and tool, and master and slave are similar, between the two terms of each of these pairs there is no partnership (*koinonia*); for they are not two, but the former is one and the latter is part of that one, not one itself; nor is the good divisible between them, but that of both belongs to the one for whose sake they exist. For the body is the soul's tool (*organon*) born with it, a slave is as it were a member or tool (*organon*) of his master, a tool (*organon*) is a sort of inanimate slave" (Aristotle, *Eudemian Ethics*, 1241b, 15).

19 See Cayley, D. *The Rivers North to the Future*. p. 183 and Agamben G. *The Use of Bodies*. p. 70.

ments possess the intrinsic contradictions pertinent to instruments as such. Each is supposed to unfailingly transmit and realize the will of the principal agent while also obeying their own specific natures—as for instance, water flows and celebrants speak. Moreover, the efficacy of the ritual is not compromised by the condition or intent of the instrument—polluted water and sinful ministers can baptize as effectively.

Agamben convincingly shows that Aquinas refers precisely to the Aristotelian notion of *animate instrument* to explain how the administrator of the sacraments “comports himself in the mode of an instrument.”²⁰ The contradictory character of the type of causation instruments embody—the fact of realizing the end of the principal agent while acting as a secondary agent which obeys its internal mechanical functioning—was hence first conceived and explained in the context of arguing for ministers as animate instruments in the ritual of administering the sacraments. Ancient Greeks thought that the slave body was an integral part of and non-separable from the master’s body.²¹ In contrast, for Aquinas, the minister was distinct from God and an instrument for the administration of sacraments. Accordingly, the understanding of modern technology as instruments that are separable and distinct from humans and designed for their use continues to carry the sign of the intrinsic contradiction of animate instrument. From this perspective, symbolic AI can be understood as a paradigmatic example of *absolute* instrumentality where the will of God as the principal agent who commands the minister as a human instrument has been incorporated in the technology itself. Early forms of AI and technology *per se* owe themselves to the separation between instrument and user inaugurated by the notion of *causa instrumentalis* in the 12th century.

20 Agamben G. *The Use of Bodies*. p. 74-75

21 Ibidem p. 18.

How instrumentality has changed human potential and action

The imitation game attending the rise of instrumentality has trapped people of modern societies and their tools within dichotomous views that also informed early AI. Modern humans have been imagined in the model of the Christian God, as beings able to construct any kind of artifact or technology that can convey their will without distortions. At the same time, like the slaves of antiquity, modern people are also imagined as office and job holders—working instruments that faithfully carry out the will of others. However, contrary to slaves, modern workers preserve their autonomy when they exercise the possibility of leaving their jobs. In this modern version of the imitation game shaped by instrumentality, both workers and AI embody the contradictory characteristic of having the will of a principal agent while also behaving as being an instrument.

Aristotle presented his arguments concerning human making based on his ideas of potentiality and action. Agamben's reflections are very enlightening in thinking about how the ideas of human action and potentiality have changed because of instrumental causality. According to Agamben, human making presupposes a specific type of potentiality and relationship between potentiality and action that cannot be found in animals and things. Though it is a matter he has extensively discussed in many of his writings, it is perhaps most clearly laid out in his *Creation and Anarchy*.²² There, he discusses in detail the relationship between human making and *resistance*²³ to action by starting from the concept of *potential* as developed in Aristotle and Western philosophy.

22 See e.g., Agamben, G. (2004). *The Open: Man and Animal*. (Stanford: Stanford University Press), Chapter 9; Agamben, G. (1998). *Homo Sacer. Sovereign Power and Bare Life*. (Stanford: Stanford University Press). Agamben, G. (2019). *Creation and Anarchy. The Work of Art and the Religion of Capitalism*. (Stanford: Stanford University Press)

23 Agamben, G. *Creation and Anarchy. The Work of Art and the Religion of Capitalism*. p.17

The accepted understanding of the relationship between potentiality and actuality is that the former passes into the latter. Accordingly, when playing the piano, the pianist actualizes her potential to play the piano by exhausting the potential to play it. However, according to Agamben, Aristotle has a deeper understanding of potentiality.

To elaborate the meaning of human potentiality and action,²⁴ Aristotle specifically refers to the potential of those who have already acquired an art or knowledge such as architects, sculptors, and grammarians.²⁵ Those who are not pianists cannot play the piano. This inability or privation or lack is not what Aristotle is concerned with. Rather he focuses on the accomplished professional and master of an art, say a pianist, who possesses both the potential to play and to not play the piano. When he does not play the piano, Glenn Gould is actively suspending or withholding his potential to play it. This suspension, refusal, or restraint with respect to possible action is well-known. What is less well understood, is the symmetric case of playing the piano. When Glenn Gould is playing the piano, he is not only completing in action what he could potentially do. Rather, while playing he is also actively suspending or resisting his potential to play. In this sense, Aristotelian potentiality is “essentially defined by the possibility of its non-exercise.”²⁶ Aristotelian potentiality is therefore at

24 For Aristotle, act is generally what a being is already at a given moment. For example, a table is a table in act, a child is a child in act, and so on. Potency and potentiality refer instead to that which, at the moment, is not, but which can become. For example, an acorn has the potentiality to become an oak, a child has the potentiality to become an adult. When the acorn becomes an oak, the acorn is an oak in act and no longer in potency. On this, see for example, Aristotle's discussions in his *Metaphysics* and *Physics*. In the arts and human making, potentiality is however more specific than what can be generally identified in nature, in so far as it presupposes the presence of a habit. On this point see e.g., Agamben G. (2016). *The Use of Bodies*. p. 60, and Agamben, G. (2019). *Creation and Anarchy. The Work of Art and the Religion of Capitalism.*, p. 19

25 Ibidem, p. 16.

26 Agamben, G. *Creation and Anarchy. The Work of Art and the Religion of Capitalism*, p. 17

work also *during* activity as potential not to act. For this reason, Agamben insists that “mastery preserves and exercises *in action* not its potential to play but its potential not to play.”²⁷ Thus, human action cannot be understood as a simple transition from potentiality to action. Instead, as exemplified by masters of an art, action is exercised by acknowledging and suspending one’s potentiality to act during action, by resisting the ever-present potential to do.

Said differently, this kind of resistance is always present in human making in the form of a constant dialectic between a personal and an impersonal element. The impersonal element (i.e., the potential-to, the genius that drives toward work and expression) constantly exceeds the particular subject while the personal element (i.e., the potential-not-to) is constantly exercised by the individual who opposes the impersonal. Through the enactment of suspending action, humans express a kind of second order action that results from the expression of a second order potentiality, which opens to contingency. Through this enactment, they can act on action and thereby express a potential of the potential²⁸, i.e., the potential to not pass into the act while opening up to the unexpected. In this dialectical process between personal and impersonal elements, subject/object distinctions become deactivated. Thereby, for example, painting becomes painting of painting through the exposition and suspension of gaze in the act of painting, poetry becomes poetry of poetry through the exposition and suspension of language, and so on. What people do is thereby distinctively characterized by the constant possibility of *stepping in and stepping out* from action during action. This possibility entails that persons are never completely defined by their potentialities and actions. Persons

27 Ibidem, p. 19

28 Ibidem, pg. 24

constantly have the possibility to enter and exit the roles that seek to define them, and this can happen during the exercise of these roles.

When seen through the lens of this relationship between action and the potential to-not-do, the change induced by instruments undermines action by severing it from the potential to-not-do. It is obvious that, in general, the age of instrumentality has reduced the potential of individuals to re-direct and interrupt what they do by having multiplied the possibility of automatic actions at unprecedented scales. Compared to previous human tools, modern instruments are relatively autonomous and detached from the people employing them. This increased automatism can be gauged, in part, by a shift from the endosomatic energy to exosomatic energy needed for their operations. Those who operate a machine have little or no capacity to interrupt or re-direct their actions. This diminution of human potentiality is also reflected in the large-scale standardization of action in regimes of industrial production that generate the unwanted systemic effects that Ivan Illich named counterproductivity.²⁹ Accordingly, we can understand the contradictory social imaginary expressed with early forms of AI as “intelligent machines” to reflect the increased automation and instrumentalization of human action. However, the more recent types of AI raise the possibility that action may no longer be understood as the active suspension of the potential to-not-act and vice versa. This deeper depotentiation of humans deprives them of potentiality by reducing it to self-recursive action within negative feedback loops. This reduction may well be the signature of systems, of which the latest types of AI are an exemplar.³⁰

29 See Illich, I. (1976). *Limits to Medicine. Medical Nemesis: The Expropriation of Health*. (London: Penguin Books), p. 215

30 Depotentiation must be exclusively intended here in relation to reduced possibilities for single persons to resist to action while using instruments and not as a

Contemporary AI and integration into systems

Contemporary forms of AI can perform a large variety of tasks. Some of these AI can recognize human speech to make travel reservations in accordance with passenger preferences of routes and prices. Other AI's can steer vehicles autonomously for many miles. Then there are AI programs that can diagnose lymph-node pathologies or call emergency services when they detect a road accident.³¹ The examples can be multiplied at will. Crucially, rather than relying on human programmers, many of the emerging AIs perform their tasks using machine learning techniques that consist in the automatic and iterative processing of very large data sets by which they produce their own algorithms without having been instructed on what to do.³² Recently, it is so-called deep learning techniques that seem to achieve the highest level of performance in a variety of arenas including decisions about medical therapies, selection of job candidates and loan applicants.³³ Deep learning techniques rely on artificial neural networks with weights associated with each network node that automatically adjust to reduce the size of the outcome error.³⁴ Moreover, improvements in their performance in-

reduction in the number of activities and new applications of instrumentality.

31 For more examples of existing applications see e.g., Russel, S.J. & Norvig, P. (2020). *Introduction to AI: a modern approach*. (New York: Prentice Hall). Chapter 1.

32 Contrary to so-called *supervised learning techniques* where training occurs over pre-labelled data against which machine algorithms performances can be measured and improved (e.g., in images classification), machine-learning techniques are unsupervised or self-supervised learning techniques and do not rely on otherwise very time-consuming data labelling activities. See e.g., Spathis, D., Perez-Pozuelo, I., Marques-Fernandez, L., Mascolo, C. (2022) "Breaking away from labels: The promise of self-supervised machine learning in intelligent health", *Patterns*, 3(2) pp.1-6.

33 Wani, M. A., Palade, V., (2023). *Deep Learning Applications*. Springer Nature, Vol 4.

34 For a comprehensive overview of deep learning techniques and applications, see Sarker, I.H (2021). "Deep Learning: A Comprehensive Overview on Techniques, Taxonomy, Applications and Research Directions." *SN COMPUT. SCI.* 2, 420.

creases as the intricacy of the network increases—in terms of the number of nodes and density of the interconnections between them. But this implies that the better deep learning AI machines perform, the less we can understand them or specify the steps by which they arrived at the decisions taken.³⁵ In this way, deep learning machines become endowed with a specific opacity.³⁶ Paradoxically, some now argue that this opacity of how machines work mimics the obscurity of the mechanisms by which the brain “is capable of bi-directional travel between exemplars and abstractions.”³⁷

The very large amount of data that are now employed for this kind of machine training³⁸ and the possibility of employing models applying learned patterns from one task to another³⁹ makes it very likely that a *single* general-purpose AI will soon appear. For instance, one can imagine the development of one AI that generates content, translates and summarizes texts, produces reports from notes, drafts emails, responds to queries and questions, creates new text, images, audio and visual content all based on user inputs such as text

35 On this point, see <https://umdearborn.edu/news/ais-mysterious-black-box-problem-explained> or <https://www.relativity.com/blog/paradox-of-the-black-box-inverse-relationship-between-ai-accuracy-and-transparency/>

36 Machine learning techniques can become black-boxed and impenetrable even to their programmers as they can employ thousands of millions of connections that interact with one another in complex ways. Boge, FJ (2022). “Two Dimensions of Opacity and the Deep Learning Predicament.” *Minds & Machines* 32, 43–75 (2022)

37 See Buckner, C. (2018) “*Empiricism without Magic: Transformational Abstraction in Deep Convolutional Neural Networks*,” *Synthese*, 195(12), 5339–5372.

38 Notice that this kind of training is purely operational and does not entail any kind of cognition. A widely quoted definition of how machines learn is for example the one produced by Tom M. Mitchell: “A computer program is said to learn from experience *E* with respect to some class of tasks *T* and performance measure *P* if its performance at tasks in *T*, as measured by *P*, improves with experience *E*.” Mitchell, T.M. (1997). *Machine Learning*. McGraw Hill.

39 This technique is usually referred to as *Transfer Learning*. For further information see e.g., Bommasani et al. (2021) *On the Opportunities and Risks of Foundation Models*. (Ithaca: Cornell University). <https://arxiv.org/abs/2108.07258>

or voice prompts.⁴⁰

If the forms of AI and technologies that were mainly in circulation until the mid 20th century could still be seen as instruments that were programmed by people and disabled when not needed, then the more advanced forms of AI must be understood as integrating people into artificial systems without the possibility of disconnection.

A person integrated into an artificial system is one whose interactions with the external world are completely and constantly mediated by an artifact or by an ensemble of artifacts. Such is the case with our communication and road networks. Artifacts integrating people into systems function as prostheses that cannot be put down or put away. Like a body part, such artifacts become prostheses that function as an integral part of the person. Integration into systems therefore entails a progressive blurring of boundaries between persons and artifacts. Such integration also promotes the indistinction between a persons' actions and reactions to system imperatives. When persons are integrated into systems it becomes hard to distinguish whether human action is the cause or the effect of systemic outcomes.

Crucially, such systemic integration entails the impossibility for people to step out from these interactions and to establish their own criterion for truth and reality. They are induced into a regime of constant simulation where actions become both real and unreal.⁴¹ Insofar as they are constantly mediated by artifacts, these actions are only representations.

40 These General-Purpose AI models are named *foundational models* and the form of AI being discussed here is generally named *Generative AI* while foundational models trained on text data to generate natural language response are specifically named *Large Language Models*. For further information on foundational models and General Purpose AI see e.g., https://www.adalovelaceinstitute.org/resource/foundation-models-explainer/#_ftn54

41 On this point, see the deep insights provided by Baudrillard, J. (1994). *Simulacra and Simulation*. (Ann Arbor: Michigan University Press)

Yet, insofar as these are the only relationships by which people interact with other people and the external world, they are very real.

Contemporary AI entail a deeper stage of integration into systems compared to what was achieved through previous information technologies. So far, integration into systems was mostly achieved only through well-defined material artifacts. The transport and the communication network whereby people connected to other people and with the external world was quite stable and built by people themselves. The material infrastructures and the models whereby systems were built were still human made and people could still assume to exercise some form of control over them. However, contemporary forms of AI seem instead to suggest the possibility of technological self-generation—whether of new prose, poetry, and images, or computer programs, routes, and connections— which progressively integrate humans. While the manufacturer of previous AI were still humans, new AI seem to be capable of self-production and self-replication.

The intrinsic contradiction generated by integration into systems

Whilst early forms of AI are instruments, contemporary forms of AI are integral parts of wide information networks. They cannot be thought outside the systems they contribute to create. Humans enter thereby a curious relation of mutualism with the models by which AI is constituted. The actions of people feed and change these models, which, in turn, feed and change people's actions within recursive cycles. For example, the news you receive is shaped by your swipes which is shaped by the news you receive. As a result of such recursive processes the two parts of the system that feed each other become ever more integrated, ever more similar, and indistinguishable. What might appear as a learning capability of AI is actually a process of constant and mutual adaptation

achieved through mutual surveillance and monitoring. In this way, human life becomes a gigantic simulation game and the models people come to rely on do not bear any lived truth.

The intrinsic contradiction that integration into information technologies and AI can produce is well captured by Escher's *Drawing Hands* where two hands draw one another. In the imitation game enacted through system integration, one hand represents humans and the other the system into which they are integrated. Through this game, humans draw their environment while their environment draws humans within a never-ending recursive cycle. There is no one or any will that is driving the operation and what is being drawn cannot be erased. The will of the drawer is constantly under construction and hence the drawer cannot exercise any autonomous action. It is for this reason that Escher's *Drawing Hands* cannot erase what they produce. In such recursive loops, people cannot step out, they cannot suspend what they do, they cannot exercise a potential to not-do. When integrated into artificial systems, people are defined by their actions and action equals existence. When machines imitate humans, as in the emerging AI forms, each of the two parts become progressively indistinguishable and flattened into a formless substratum made of information bits.

How cybernetic views on purposeful behavior have shaped systems

The rise of the instrumental age was informed by the idea of *causa instrumentalis* that Aquinas appended to Aristotle's *causa efficiens*. The model of the slave proved decisive in the spread of techno-scientific civilization—instruments whose 'will' was to do the will of others. Ongoing techno-science transformations that have accompanied the rise of systems are instead very likely linked to the first operational definitions of *purposeful behavior* that was formulated by cyberneticians around the mid-20th century and that are lead-

ing to various reinterpretations of *causa finalis* in science.

It is well known that Aristotle's *causa finalis* was excised from the understanding of cause in modern science.⁴² It is instructive to note how Aquinas clearly linked *causa finalis* exclusively to intelligent agents. As he stated, "...whatever lacks intelligence cannot move towards an end, unless it be directed by some being endowed with knowledge and intelligence; as the arrow is shot to its mark by the archer",⁴³ and further that "those things that are possessed of reason, move themselves to an end; because they have dominion over their actions through their free-will, which is the 'faculty of will and reason.' But those things that lack reason tend to an end, by natural inclination, as being moved by another and not by themselves."⁴⁴ By relegating this type of causation to metaphysics, modern science has been able to progressively reify notions of intelligent subjects and objectivity while separating these two domains and developing own replicable and universal methods of inquiry.

It is in this light that we must understand cyberneticians like Rosenblueth, Wiener and Bigelow,⁴⁵ who enabled the readmission of *causa finalis* into science by re-defining purposive behavior and teleology. In their operational definitions, teleological and purposive behavior are proposed as synonymous with behavior controlled by negative feedback loops. In their view, the category of purpose understood as

42 For an overview on how these causations mechanisms have been excised by science, see, for example, Losee, J. (2011) *Theories of Causality*. Routledge. For an interesting overview of how all Aristotle's causes are being readmitted by systems science see e.g., Ulanowicz, R.E. (1997) *Ecology: The Ascendent Perspective. Complexity in Ecological Systems*. (New York: Columbia University Press). Chapter 2.

43 Aquinas. *Summa*. I, Q. 2, Art. 3.

44 Aquinas. *Summa*. I-II, Q. 1, Art. 2.

45 See Rosenblueth, A., Wiener, N., Bigelow, J. (1943). "Behavior, Purpose and Teleology." *Philosophy of Science*, 10(1), pp. 18-24

feedback loop becomes a “fundamental category in science”⁴⁶ that is amenable to scientific analyses. However, these forerunners of systems science tried to dismiss any reference to notions of final causality in their reinterpretations. According to them, causality and purposive behavior both pertain to the realm of science but “the prediction of the future from the past belongs to the theory of causality” whilst “the determination of the past from the present belongs to the theory of purpose.”⁴⁷ Nevertheless, this distinction made little sense to subsequent scientists since final causation always entails a cause subsequent in time to a given effect.

Indeed, it is not accidental that the mechanisms of negative feedbacks by which purposive behavior was modeled by early cyberneticians have nowadays become the bedrock on which reinterpretations and readmission of *causa finalis* to science is taking place.⁴⁸ Reinterpretations proposed by scholars like Rosen,⁴⁹ Prigogine,⁵⁰ Kauffman,⁵¹ and Ulanowicz⁵² reveal how *causa finalis* is returning in the guise of such notions as autocatalysis, self-organization, and enablement that, to different degrees, represent reformulations of the negative feedbacks and servomechanisms that was proposed by early cyberneticians to explain ‘purposeful’ behaviors in ma-

46 See Rosenblueth, A., Wiener, N. (1950). “Purposeful and Non-Purposeful Behavior.” *Philosophy of Science*, 17(4), p. 321.

47 Ibidem, p. 321.

48 See e.g., Chase, M. (2011). “Teleology and Final Causation in Aristotle and in Contemporary Science.” *Dialogue*, 50, pp 511-536.

49 Rosen, R., 1991. *Life Itself: A Comprehensive Inquiry into the Nature, Origin, and Fabrication of Life*. (New York: Columbia University Press).

50 Prigogine, I. and Stengers, I. (1986). *La Nouvelle Alliance: Métamorphose de la Science*. (Paris: Gallimard).

51 Kauffman, S. (2009). *Towards a Post Reductionist Science: The Open Universe*. (Ithaca: Cornell University). <https://arxiv.org/abs/0907.2492v1>

52 Ulanowicz, R.E. (1997) *Ecology: The Ascendent Perspective. Complexity in Ecological Systems*. (New York: Columbia University Press). Chapter 2.

chines, animals and humans. By redefining final causation in ways that do not entail any reference to human intelligence and free-will, they attempt to readmit final cause to science while keeping religion and metaphysics aside. Overall, the great merit of early cyberneticists such as Wiener, Rosenblueth, and Ashby is to have demonstrated the possibility of expanding the realm of science to include any phenomenon amenable to schemes of circular causality by constructing mathematical theories of feedback, stability, and regulation.⁵³

However, it is crucial to contrast Aquinas on *causa finalis* and its purported return as feedback loops in contemporary systems science. The latter simply assume that beings that move themselves are, in fact, moved by something else within recursive feedback loops. By stipulating that what moves is really moved, systems science assumes to produce purposive behavior through negative feedback loops, whether in man, machine, or animal. Both Norbert Wiener and Arturo Rosenblueth made this imitative in-distinction between man, animal and machine the cornerstone of their rebuttal of Richard Taylor's critiques of their notion of purposive behavior.⁵⁴ They insisted that "men and other animals are like machines from the scientific standpoint because we believe that the only fruitful methods for the study of human and animal behavior are the methods applicable to the behavior of mechanical objects as well" and that "as objects of scientific enquiry, humans do not differ from machines."⁵⁵

53 Drack M, Pouvreau D. (2015). "On the history of Ludwig von Bertalanffy's "General Systemology," and on its relationship to cybernetics - part III: convergences and divergences." *Int J Gen Syst.* 2015 Jul 4;44(5):523-571.

54 See Taylor, R. (1950). "Comments on a Mechanistic Conception of Purposefulness." *Philosophy of Science*, 17(4), pp. 310-317. Taylor, R. (1950). "Purposeful and Non-Purposeful Behavior: A Rejoinder." *Philosophy of Science*, 17(4), pp. 327-332.

55 See Rosenblueth, A., Wiener, N. (1950). "Purposeful and Non-Purposeful Behavior." *Philosophy of Science*, 17(4), p. 326.

Note however that both Aquinas' explanations of *causa finalis* and its reinterpretation by systems science as purposeful behavior are exclusively focused on representations of free-will, intelligence, and action in terms of motion and on how such motion can be activated and maintained. In so doing, both Aquinas and contemporary system thinkers miss that it is free-will and purposeful action in humans alone that entail the constant possibility of *saying no*, i.e., the capacity *to not* act, as was present in the Aristotelian understanding of potentiality. In erasing any difference between humans and non-humans, contemporary systems science has also erased this key aspect of willed action. Now, just like machines, humans have no potential to-not-do when enmeshed in recursive systems.

How integration into systems is reducing potentiality to action

The trend to depotentiate human potentiality that started with the notion of instrumental causality in the 12th century is now strengthening with the diffusion of information systems exemplified by contemporary forms of AI. These new artifacts and the increasing number of human functions they imitate begin to integrate people within artificial systems. This is clearly visible in how *storage* of energy sources, materials, competencies, and skills of any kind is being progressively reduced locally because they are integrated into ever expanding information and distribution networks. Why have an editor here, when a book can be edited in Ethiopia?; why have a shirt factory here when shirts can be shipped the next day from Thailand?; why store shoes in my local warehouse when they can be assembled or be re-distributed and sold on-demand? Embedding local demand and supply within spatially distributed chains entails that the potential to *resist* the integrative dynamics of information systems is diminished.

The demand and supply of energy and material resources must be dynamically matched through such networks as they become ever more distributed and fluctuating. This situation makes interruptions to existing energy and material flows extremely dangerous for populations relying on them. Exemplified by the dependence on the Internet, the possibility of disconnection from these systems is becoming increasingly difficult and the information networks that mediate human actions must be kept constantly on. Within these networks, even silence from a node is changed into a message that triggers a reaction (see the number of messages we start receiving when disconnected from social networks like *LinkedIn*, *ResearchGate*, etc. for too long). Contemporary forms of AI accelerate this process of integration. At the same time, these new technologies seem to acquire their own subjectivity and intentionality, as the processes whereby they apparently “learn” by relying on training over huge amounts of data become black-boxed and increasingly opaque. If the distality of instruments enabled a sharp distinction between artifacts and subjects employing them, contemporary forms of AI seem to be able to flatten any difference and induce a perverse symmetrization between human and non-humans.⁵⁶ Long advocated by sociologists of science and technology like Bruno Latour and cemented in varieties of actor-network theory,⁵⁷ the notion of symmetrization is now being ushered in around contemporary forms of AI where it is not unusual to discuss the moral status and rights of AI.

56 To my knowledge, Bruno Latour provides the most lucid example of how potentiality can be dismissed by social science e.g., in Latour, B. (1988). *The Pasteurization of France*. (Cambridge: Harvard University Press) p. 158-176

57 Murdoch, J. (2008). “Inhuman/nonhuman/human: actor-network theory and the prospects for a nondualistic and symmetrical perspective on nature and society.” in Philo, C. (2008) Ed. *Theory and Methods. Critical Essays in Human Geography*. (London: Routledge).

If the above reflections are correct, then the integration of man-in-systems entails a curious destiny. People integrated into systems get entirely defined within self-recursive actions. When integrated into systems people cannot *not*, and the relation between original human potentiality and human action is severed. Humans lose the potentiality to not-do, to not use the system, to resist the system. Enclosed within feedback loops people can only act and their existence is a function of their action. However, when human potentiality becomes severed from actions that are fed back in a recursive loop, action becomes, paradoxically and contradictorily, indistinguishable from reaction. Shorn of human potentiality, human action comes to resemble messages without a sender. Actions under the condition of integration become an input for data models in need of constant updating and are regulated by these models if they deviate from expected reactions. This is the kind of simulation in which the machines that imitate humans consume reality. Crucially, when defined only by actions within systems, humans are left with no possibility for *forgiveness* and *redemption*. Further, when actions cannot be separated from reactions, persons cannot be considered *accountable* for what they do either. Forgiveness, redemption, and culpability presuppose the ability to be other than what one does and to be more than actions within negative feedback loops. This is the main quandary when humans are integrated as functioning units within systems.

Swiped right into the system

by Samar Farage

Long before ChatGPT, Ivan Illich issued a warning:

[I] foresee that machines which ape people are tending to encroach on every aspect of people's lives, and that such machines force people to behave like machines. The new electronic devices do indeed have the power to force people to 'communicate' with them and each other on the terms of the machine. Whatever structurally does not fit the logic of machines is effectively filtered from a culture dominated by their use.

The machine-like behavior of people chained to electronics constitutes a degradation of their well-being and of their dignity, which, for most people in the long run, becomes intolerable. Observations on the sickening effects of programmed environments show that people in them become indolent, impotent, narcissistic, and apolitical. The political process breaks down because people cease to be able to govern themselves; they demand to be managed.¹

Illich pronounced these words in 1982 at the *Asahi Symposium: Science and Man—the computer-managed society*. Every line of this excerpt can bear pages of commentary and discussion, but here I will focus on smartphones to show how we are chained to electronics, how we engage in machine-like behavior, and have slouched from the age of tools into the age of systems. In his later years, Illich said he had intuited the

1 Ivan Illich, "Silence is a Commons," in *In the Mirror of the Past*, (London: Marion Boyars, 1992), p.47.

end of the tool or instrument as such. He felt Western culture was crossing over a watershed into a new historical era that he named the Age of Systems. I argue that the smartphone exemplifies the portal through which people are seduced by design, into degrading and undignified machine-like behavior. I do not want to speculate on how the people will cast off their attachment to this intolerable condition. Instead, I limit my attention to show that the smartphone cannot be understood as an instrument and to therefore substantiate Illich's prescient claim that we are living through a historical discontinuity.

Smartphones everywhere!

I am both mesmerized and repulsed by the new addition to most people's hands. A plastic outgrowth now seems permanently attached to our palms: its size and sophistication varying only by the wealth and status of the hand to which it is connected. It is an object that most people can neither put down nor put away. The contemporary philosopher Byung Chul Han has called it "a mobile confessional box" and "a subjugation device". "It acts like a rosary and its beads; this is why we keep a smartphone constantly at hand. The 'like' is a digital amen. We keep going to confession. We undress by choice. But we don't ask for forgiveness, instead we call for attention."²

As a devotional object, it induces liturgical gestures—the prayerful bent head over the glowing screen, the scrolling thumb as if working over a rosary or misbaha, and the periodic exchange of access to include another into one's sectarian fold. It not only defines the rhythm and structure of social relations but also shapes the sense of self and identity. It is not accidental that the most popular smartphone is named the

2 Byung Chul Han, "The smartphone is a tool of domination. It acts like a Rosary." *El Pais*, interview by Sergio Funjul, October 15, 2021

I-phone. As one student said when I tried to take away his smartphone: “you cannot do that, it is my whole life.”

It is well-known that it was the iPhone, announced in 2007, that began the world-wide contagion of the smartphone. More than half the world’s population now uses smartphones and are active on some social media. Teens spend more than half their waking hours glued to their phones while children under the age of 12 in the US spend roughly a quarter of their day watching screens.³ Smartphones combine formerly distinct devices on one platform: the internet-connected computer, the mobile telephone, the video machine, the camera, and the music player are all integrated on one interface. Additionally, a host of specialized apps attend to almost every need and desire—social media to keep up with family, friends, and the news; weather and navigation apps to help plan for the summer holiday or weekend trek; apps to access podcasts, movies, and songs that entertain; even apps that function as so-called personal assistants to help with schedules, appointments, and emails. The smartphone accompanies us everywhere—our location is tracked, our steps counted, our purchases recorded, even our heartbeats and sleep cycles monitored. It anticipates our preferences and acts on them. It speaks, cajoles, and advises us. It has all the answers in one package. It was once called an intimate machine, and never has there been a more intimate machine!

The smartphone is not an instrument.

Illich identified a fundamental difference between the instrument and a system. He argued that the instrument presupposed a distality or separation between the device and the user which a system collapsed. Tools, he said, “mean something that incorporates, materializes or formalizes a human

intention and can be picked up or not picked up by the person who wants to pursue the goal that corresponds to his intention.”⁴ Tools are designed by the tool maker for specific uses. The axe is designed to cut but it can be used for chopping down a tree or killing a man. The purpose of its use depends on the intention of the user. In this sense, the tool or instrument materially confronts the user who conceives of herself as standing apart from and distinct from it. The instrument requires or calls forth the intention of its user.

In contrast, according to Illich, a system’s immateriality integrates the user into itself. It permits no conceptual or felt difference between a device and the user—the first is understood as a part, extension, or continuation of the second. Systems are designed by presuming human actions and feelings can be redescribed as feedback. In systems theory, a person is reconstructed as a manageable and self-managing element encased within a larger system. From the viewpoint of the system analyst, the bodily self-perception of a person which permits the distality between and instrument and the user is an illusion. Instead, says Illich, for the system designer, “a man walking a dog is a man-dog-system — a cyborg, as one would say today.” Accordingly, self-perception, he continues, is the result of what is designed by “the system analyst who imputes to the [person] what he or she is...”⁵

Insofar as the users are seduced into taking the viewpoint of the system analyst as their own, they integrate themselves into the system. Unlike tools, systems can neither be put down nor rejected. Unlike tools, systems do not transmit the intention of the purported user but enact the commands of the programmer. Most of humanity is now hardwired into the system, wirelessly! The systemic dimen-

4 In David Cayley, *Rivers north of the Future*, (Toronto: Anansi Press, 2005), p.202.

5 Rivers, p.204.

sion of the smartphone is not only that it integrates humans as nodes in an ever-growing network, but also that self-perception is shaped by the system analyst. It is in these ways that systems become all-encompassing and integrate us into a man-machine environment.

Man-computer symbiosis.

The voluntary integration into networked systems was first dreamed up before it was designed. The loss of distality through computer networks today relies heavily on three conceptual shifts. First, Gerd Gigerenzer has traced the history of the metaphor of the mind as computer to the late 17th century during which so-called Enlightenment thinkers distinguished both reason and moral sentiment from calculation but only to reduce the former to the latter. From then on, it became the enduring part of the modern scientific drive to shrink ideas and sensations to the combinations and permutations of numbers. By the 19th century, calculation became the dull, repetitive, monotonous work that could be performed by machines, as suggested by Babbage's *Difference Machine*.

By the second half of the 20th century, the parallel notion of the computer as mind became widely accepted, signaling the second conceptual shift behind the design of networked systems. In the 1930s, Alan Turing's work on the algorithm led him to suggest that the human mind was in some sense a computer. This conceit was only deepened by John von Neumann in 1943 when he explicitly stated that the neuron was the fundamental element of the brain and that its nervous pulses could be understood as a digital 0/1 code. Accordingly, the entire nervous system, he proposed, had a digital character.⁶ By the 1970s, Joseph Weizenbaum discovered

6 John von Neumann, *The Computer and the Brain* (New Haven: Yale University Press, 2012), p.44.

his secretary treated his program DOCTOR that mimicked a Rogerian psychologist as if it were a human being. Until then, Weizenbaum had not realized “that extremely short exposures to a relatively simple computer program could induce powerful delusional thinking in quite normal people.”⁷ Yet, this replacement of human judgment by mindless calculation would be precisely what animated the third conceptual shift behind the fabrication of man-machine systems.

Though the dream of a man-machine symbiosis is old, the integration of the human and the computer takes concrete shape with JCR Licklider who was nicknamed the Johnny Appleseed of modern computing. His paper titled “Man-Computer symbiosis” in 1960 foresaw “the very close coupling between the human and the electronic members of the partnership.”⁸ Symbiosis refers to a “cooperative interaction between men and machines. Man-computer symbiosis is a subclass of man machine systems...” Licklider made a clear distinction between instruments that mechanically extended man’s abilities and artificial intelligence. The aim of the latter, he said, is not to mechanically extend one’s capacities but to replace one’s intelligence and thought. Soon after, Doug Engelbart, who invented the mouse, opened his Augmentation Research Lab in Stanford to develop “principles and techniques for an augmentation system” that would enhance the human intellect through interactive multi-console computer displays. It took two decades to domesticate the public to these new computers, which was mostly achieved by anthropomorphizing them. Computers were given human features and machine-like characteristics were imputed to humans. It is telling that in 1984, the Man of the Year on the cover of

7 Joseph Weizenbaum, *Computer Power and Human Reason*. (San Francisco: Freeman Co, 1976), p.7.

8 JCR Licklider, “Human-computer symbiosis, *IRE transactions on Human factors in Electronics*, v.1, 1960, p.4-11, p.4.

TIME magazine was the Mac computer, and in its advertisement to the world, the computer itself introduced its inventor, Steve Jobs, as “a father to me.”

Computers as persuasive social actors.

The human-computer symbiosis began to be realized because computers, unlike other instruments, could be designed to be interactive. In the 1950s and 1960s, computers were already conceived as partners, tutors, or replacements. By the 1970s and early 1980s, the new field of Human- Computer interactions (HCI) emerged to study such interactions. The earlier applications of HCI included hypertext research, text editing, spreadsheets, computer aided design and video games. Over the next three decades, psychology departments were enlisted and disciplines such as behavioral economics and recently neuroscience began to shape the intricate features of such interactions. The world wide web of the 1990s clearly demonstrated the interactive capacities of computer systems that would culminate, by 2022, in the artificially intelligent systems of ChatGPT.

However, by the early 1990s, the notion of the man-computer symbiosis was incrementally naturalized by Clifford Nass, who promoted the notion of computers as social actors based on experimental evidence of HCI research. He characterized the computer as a social actor, implicitly consigning the human part of the equation to an engineerable element. His student, BJ Fogg took his idea one step further by insisting that computers could be “persuasive social actors.” According to Fogg, the most likely explanation for people responding to computers as though they were human was that humans were “hardwired to respond to cues in the environment.” He thought that “social cues from computing products could trigger automatic responses from humans that were “instinctive rather than rational”, that were “auto-

matic and natural.”

BJ Fogg founded the Persuasive Technologies Lab at Stanford in 1997 for such purposes. The lab remains at the heart of the tech industries’ design and BJ Fogg’s students have included inventors of Instagram, Snapchat, Facebook among others. His work was a quantum jump from earlier instances of using the interactivity of computers to persuade users to do things. In the 1970s and 1980s, a few systems were designed to promote health and increase workplace productivity. One of the earliest was the Body Awareness Resource Network (BARN), designed to teach adolescents about health issues such as smoking, drugs, exercise, and more. Gradually other interactive programs of this nature followed, most designed to address adolescent health issues or to treat psychological disorders. But it was only with the Stanford Persuasive Lab that a host of concerted efforts were deployed to design computers as persuasive social actors “to change what we think and do.”⁹

At Stanford, BJ Fogg was not interested in computers themselves but in how such interactive machines could influence human behavior. His aim was to study and improve the man-computer symbiosis by making the interfaces as interactive as possible, which is to say, to design feedback loops into devices by which to integrate them with humans. The basic template for such feedback loops used by most persuasive engineers exploits one or more of the five kinds of cues that trigger human behavior as described by B.J Fogg. These include physical cues (movement of eyes, face, body); psychological cues (preferences, humor, feelings); language; social cues (taking turns, praise, answering questions) and finally, enacting social roles (authority, experts, clients).

To this end, BJ Fogg invented a field of study he called

9 Summarized in BJ Fogg, *Persuasive Technology: using computers to change what we think and do*, (Elsevier, 2003). pp.89-120.

Captology (an acronym for Computers as Persuasive technologies). Captology was the study of “all methods and techniques, apps, designs used to enthrall us, seduce for the purpose of changing behaviors and attitudes without coercion or deception.” Believing that technology could rival language in its persuasive powers, he wanted to design technologies that “allows you to trigger behaviors in a new way, motivate them a new way and then simplify, automate and scale up.” The goal was to make digital products irresistible by capturing our attention and increasing users’ engagement adding a sense of willingness and voluntarism to such manipulations.

Fogg had a simplistic algorithm to capture human behavior, one which has been adapted and adopted in many tech designs. He stipulated that $B=MAT$, or Behavior equals the sum of motivation, ability, and the trigger. For him, humans were nodes motivated by the desire or need for something. They seek positive sensations and avoid negative ones. Motivation also includes the element of anticipation whereby expectations, hope and fears about the future are brought into the present. Sociability and a sense of belonging are elements of the variable called motivation. Ability, in contrast, refers to the ease of use or convenience by which the user is captured to remain attached to the machine. User convenience is measured according to six categories in Fogg’s model: time, money, mental effort, physical effort, social deviance, and non-routine acts. Promoting the ease of use requires designing “user friendly interfaces.” Finally, the triggers or prompts are the enticements that keep the human part of the interface coming back for more. They are the reminders or commands that spark, facilitate, or signal the designed behavior depending on the motivation of the user. A forgetful or inactive user might need a “spark” whereas a highly motivated user could use a “signal”. Triggers engineer “tiny habits” which are intended to determine “what you think and do.”

Nir Eyal was one of the best known students of BJ Fogg. He is a behavioral engineer and consumer psychology professor at Stanford who popularized the telling word hooks to indicate what were once understood as the system feedback loops.¹⁰ Explicitly designed to build habit forming products, Eyal proposed a four-phase model to inculcate specific behavior patterns in humans. As he said, “The Hooked Model is a way of describing a user’s interactions with a product as they pass through four phases: a trigger to begin using the product, an action to satisfy the trigger, a variable reward for the action, and some type of investment that, ultimately, makes the product more valuable to the user. As the user goes through these phases, he builds habits in the process.” The hooks in Eyal’s model creates persistent routines or behavioral loops by inscribing the neural network with new pathways. Both teacher and student thereby intended to engineer humans with automated behavior.

Such persuasive technologies or habit-forming apps derive from Skinnerian behaviorist psychology even when they appear in academic fields seemingly distant from psychology. For example, Skinner’s operant conditioning which uses “intermittent reinforcement” not only appears in the “variable reward schedule” of Fogg and Eyal, but also in the vastly more popular “nudges” of behavioral economics.¹¹ Nudges are easy, low-cost interventions that are designed to alter people’s decision making. They are easily applied and spread through mobile devices and online communications that speed the adoption of new designed behaviors. Designers of Digital nudges are called “choice architects” because they design the environment in which the user must behave.

10 Nir Eyal, *Hooked: how to build habit-forming products* (Portfolio Books, 2014).

11 This burgeoning field which influences everything from public policy to parenting is well represented by Richard Thaler and Cass Sunstein, *Nudge: improving decisions about health, wealth, and happiness*. (New York, Penguin Books, 2021).

Digital nudges include a variety of techniques ranging from simply changing a background color or photo to constructing decoy effects, middle option bias, scarcity effects, and so on.

Similarly, lessons from the gambling industry have proven useful to the design of interactive computer interfaces that determine behavior. Social media users are often modeled on gamblers in a casino not only because of their obsessive behavioral patterns but also because of the tricks and techniques used to keep the gambler playing. Casinos block out daylight and offer continuous refreshments and meals to create a trance like flow state that maximizes the time spent in them. Similarly, the smartphone is designed to enhance the experience of “dropping out of time”, of creating a feeling of being in the “machine zone” that maximizes time on device.”¹² One can think here of the time experience on the smartphone—the many hours spent as if in a daze while going down one rabbit hole after another. Is it any wonder that another student of BJ Fogg –Tristan Harris– called the smartphone “the slot machine in your pocket”?

Programmed Environments, Managed Behaviors

It was also Tristan Harris, a Stanford computer scientist and Google ethicist who in 2013 blew the whistle on persuasive technologies. A couple of years later, he was the first of many inventors of persuasive technologies to apologize for the nefarious effects of their creations that “hijacked our attention and brains.” Through the Center for Human Technology which he co-founded with Aza Raskin and the film *The Social Dilemma*, he documented how our behaviors are being programmed by algorithms and invisible engineers behind the scenes. Tristan Harris knew these tricks

12 Natasha Schull, *Addiction by design: machine gambling in Las Vegas* (Princeton: Princeton Press University, 2014).

well also because he himself was a magician who gained the confidence of the crowd by playing on human emotions and weaknesses. Harris explained how social media operated by manipulating human emotions whether social anxiety, the need for love, admiration and recognition, jealousy, or envy. These emotions are used as punishments and rewards to hook you to your device. These systems are designed to connect with the brain and its “reptilian” pleasure centers: a well-designed social media system releases timed dopamine squirts, as do drugs such as cocaine and chocolate, to keep us coming back for more. As Harris said in his testimony to Congress: “...in an attention economy, there is only so much attention and the business model always wants more. So, it becomes a race to the bottom of the brain stem [and] as attention becomes more competitive, we must crawl deeper down the brain stem to your identity and get you addicted to get attention from other people.”

Sean Parker, an early president of Facebook, confessed that the designs of interactive apps deliberately “exploit human vulnerabilities.” Social media were offered as a cure for the loss of communities and loneliness and infinite entertainment was offered as a solution to drudgery and boredom. But as Illich understood half a century ago, such technologies only escalate what they pretend to eliminate. Examples of the design features of interactive apps that keep humans glued to their machines include:

1. The touch screen, the smooth swiping and the infinite scroll are designed to ensure that users stay online as long as possible. Ezra Raskin who invented the infinite scroll and is now a crusader at the Center for Humane Technology, said that “seamless experience was deliberately engineered to take away any stopping cues and breaks so that users do not realize when to stop.”
2. The ubiquitous “like button” makes us glut-

tons for social approval and social validation. We measure our worth and our popularity by numbers of likes. Likes are also given as “intermittent rewards” known to work better in enticing people to return for more. For Nir Eyal, the dopamine hits from such rewards keep us searching for more by inducing a semi-stressful response we call “desire”. It is for this reason that he insists he is in the business of “manufacturing desires.”

3. Others habit-forming features include: “Push notifications” that intrude and interrupt when your attention is distracted; “Auto play” on movie streaming platforms to prompt our continuous engagement—this is why we end up consuming two or three hours of mindless content on Netflix having started with a short three-minute video; “streaks” which reward us for staying on a game or learning language using sounds, colors, and icons that make us feel victorious; “Pull to refresh” button which updates content continuously in the style of a slot machine, giving the illusion of control and “the allure of unpredictable rewards.

4. Customization and personalization, such as Spotify’s slogan “soundtrack your life with Spotify”; YouTube’s “broadcast yourself”; or Tik Tok’s “for your page” makes the user’s experience appear more intimate. The system now integrates us by appearing to be made just for us. It can tailor ads, newsfeeds and recommendations that stroke our egos and blur the distance between us and the device. So, designers mostly use three criteria— speed, ease of use, and emotional manipulation –to keep users “more invested” and “engaged.” People feel flattered and special because the machine now knows them and caters to their interests. If you watch cat videos, you will get more cat videos on your search screen. If you “like” stories of local foods or global wars, your

news feed will adapt accordingly.

5. Gamification according to which apps use game designs that make them “fun.” We voluntarily now submit ourselves to these apps because of the multiple pings, rewards, dancing images that compliment us at every step. These features are part of a larger gamification of everything with points, rewards, and a leaderboard. For instance, the language app Duolingo and the exercise app Fitbit use all these features to keep users attached to their devices.

The principal reason for the development and spread of these interactive features is that people spend as much time on their devices as possible so that eyeballs, clicks, swipes could be harvested as data sold to advertisers. The business model of the giant tech companies is to give their product for free in exchange for ad revenues from other giant companies. As is widely derided, when the product is free, you are the product.

Is Addiction another name for System integration?

In *Tools for Conviviality*, Illich remarked that “in a consumer society there are inevitably two kinds of slaves: the prisoners of addiction and the prisoners of envy.”¹³ The smartphone with its interactive apps is designed to addict. In fact, the addictive features of computer networks were already known by 1995 when Ivan Goldberg made up a fictitious sickness he called “Internet addiction disorder.” During the same year, a young doctorate student, Kimberley Young, started her studies on “the addictive use of the internet as a pathological condition” and Mark Griffith wrote a path breaking paper titled “Technological Addictions.” Today there are thousands of

13 p.46-7.

scholarly articles on the internet and related addictions.¹⁴ In this respect, we are all now prisoners of addiction. But equally, we are prisoners of envy because social media are designed to fuel constant comparison with strangers.

However, is the word addiction appropriate to describe our inextricable attachment to the smartphone? Is addiction sufficient to describe how humans were swept right into the system, how we became enmeshed in the man-computer symbiosis?

Etymologically, the word “addict” derives from the Latin *addictus*, past particle of *addicere* meaning, “to deliver, to give one’s assent to” which combines *ad* “to” and *dicere* “to say, declare.” Figuratively, to be addicted meant “to devote, consecrate, or abandon oneself to” and in this sense from the 16th century meant “to devote or give oneself to a habit or occupation.” Interestingly, this sense is a softer form of the earlier meaning of *addictio*. As technical term in Roman law between the 5th and 3rd centuries BCE, *addictio* named the judicial proclamation by which the judge gave up a debtor to his creditor, the pronouncement by which the debtor was made the prisoner or slave of his creditor.¹⁵ Not a few of these debt slaves had incurred gambling debts. Therefore, the association between gambling, enslavement, and addiction has a long history. The contemporary meaning of addiction as a compulsive habit medicalizes and mutes the hard edge of addiction as a condition of enslavement.

The word “user” itself tells a story of addiction. “Users” also name those addicted to heroin, opioids, and other substances. Drug addicts come back for the dopamine surge

14 Mark Griffith, Technological Addictions, *Clinical Psychology Forum*, 76 (76), 1995. pp.14-19. See Twenty Years of Internet Addiction...Quo Vadis by P.K.Dalai and Debashish Basu *Indian Journal of Psychiatry*, 58(1), 2016, pp.6-11.

15 Richard Rosenthal and Suzanne Faris, “The etymology and early history of ‘addiction’”, *Addiction Research and Theory*, 27(5), pp.437-449, 2019.

of the next hit. And like gamblers, those seeking the pleasure from their social media clicks are driven by a behavioral addiction, defined as “any behavior that a person craves, finds temporary relief or pleasure in but suffers negative consequences as a result of, and yet has difficulty giving up.” The social media addict is similarly called a user. Each time we download an app, we sign user agreements which we never read, we are described as end-users, we flock towards user-friendly programs, and we also have usernames.

However, the word user also has the older sense of autonomy as in “tool user.” But the smartphone is not a tool, as I have just argued. In the sense of Ellul, smartphones are the ultimate “technique” that entrenches us completely into the technological system. In the preface to *The Technological Society*, Jacques Ellul described technique as “the totality of methods, rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity.” The adoption of technique has prevailed not only in our digital and technical devices but infiltrated all aspects of human life. The technological system promises productivism, efficiency and maximizing outputs with minimum inputs. Feedback loops or hooks are necessary to ensure the best functioning of such a system. Not only do we “love our cell phones”, but we constantly justify this integration in the name of convenience, ease, speed, productivity, the elimination of boredom, and so on. We continue to pretend that systems are like tools that serve us. Therefore, we ask only what they can do for us, not what they do to us or say about us.

In truth, as Jean Robert pointed out, systems are pseudo tools. Under the pretense of being tools, a whole reengineering of humanity is underway whereby behavior, feelings, and thoughts are now designed, directed, and integrated into the cybernetic system. As Nir Eyal said about the networked systems that are our smartphones, they are built specifically to

persuade people “to do what we want them to do. We call these people users and even if we don’t say it aloud, we secretly wish everyone of them would become fiendishly addicted...”

When addicted, we become enslaved subunits in systems because there is no distality between us and the system that integrates us with its dings of pleasure and seductively accessible portals. The smooth screens are portals that wire us to virtual networks and clouds of data beyond the felt world. We are being designed to interface with avatars, profiles, and ghostly connections rather than allowed to live with and among each other. Systemic pseudo-tools cannot convey or carry our intentions but only encode the commands and instructions of their programmers.

By design, systems permit neither autonomous action nor freedom. B.F. Skinner, the father of behaviorism and the inspiration for persuasive technologies stated the matter simply: “it is in the nature of experimental analysis of human behavior that it should strip away the functions assigned to autonomous man and transfer them one by one to the controlling environment.”¹⁶

I believe one should draw a clear distinction between autonomous action and designed behavior. A behavior is an engineered habit that is built on compelled obedience to triggers and prompts. Autonomous action is thoughtful, rooted in the senses, and presumes the possibility of resistance. It allows intention and uncertainty. It bespeaks the contingency of the world. The solidity of the world that we encountered through our bodies and senses was our haven from the informational hell we inhabit today. An addict craving continuous stimulation is not free. To understand the deepest consequence of our integration into systems, let us hear from one of those who addicted us to them. The inventor of virtual reality

16 B.F. Skinner, *Beyond Freedom and Dignity*, (New York: Hackett Publishing, 2002), p.198

(VR), Jared Lanier, has put it starkly. Our Freedom itself is at stake, he says, because “addiction turns you into a zombie. And Zombies don’t have free will.”¹⁷

17 Jared Lanier, *Ten arguments for deleting your social media account right now*, (New York, Henry Holt Co. 2018).

A Theory of Technique

by Philippe Mesly

In 1973, Ivan Illich stated that our industrial society had only two paths ahead of it: “Faced with these impending disasters, society can stand in wait of survival within limits set and enforced by bureaucratic dictatorship. Or it can engage in a political process by the use of legal and political procedures.”¹ By the nineties, he believed the opportunity to take the second path had lapsed:² henceforth, revolution is foreclosed; henceforth, we live in a world of consequences following the trajectory of actions already taken—or not taken. Our options have dwindled, our capacity to alter the state of the world has narrowed.

Climatologists appear to concur. At any given moment, the window of opportunity for mitigating climate change only presents a limited set of options. With each passing moment, the next window offers more modest capacity for change, and less time within which to make it. By now, 1.5 °C of warming in the next 10 years is practically guaranteed.³ More than likely, we will miss the chance to keep it below 3.5 °C even in the long run.⁴ The force of momentum is too strong, the scope of action too limited, and the defendants of the status quo too well-armed. This is life after “action into

1 *Tools for Conviviality*, (New York: Harper & Row, 1973), 100.

2 *The Rivers North of the Future*, (Toronto: House of Anansi Press, 2004), Ch 13, “Age of systems” pp.157 and passim.

3 Relative to pre-1850 global averages. <https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements>

4 <https://www.cbc.ca/news/science/ipcc-climate-target-1.6782625>

nature,” a phrase Hannah Arendt used to describe the deployment of irrevocable processes into the natural world.

David Cayley has articulated the sentiment that the fire this time may very well turn the world to ash.⁵ After millennia of millenarian doomsaying, a massive climatological shift could spell the true and final doom. Surely, there will be great unrest: migrations, famine, pestilence, war, and death. Will the human race perish? I don’t know. But until it does, windows of opportunity remain. It is a matter of determining what and where they are, for opportunity always sets its own terms.

The apocalyptic narrative exposes the question at the heart of all environmentalism: *whether life is worth living if it means giving up everything but life*. It is one of the oldest questions of philosophy. Socrates sought the good life and, when he was given the option to trade it in for survival, replied no. Most recently, Agamben has been making the case against “bare life.”⁶ He has argued, controversially, that the pandemic revealed the extent to which the governments and cultural leaders rejected the philosopher’s answer to the question, electing to promote survival at the cost of even the most basic of Maslow’s needs: shelter, family, culture.

But the climate crisis has failed to elicit the same concern. It may be argued that in this case the threat is less immediate. Yet, for the vast majority, the Covid pandemic was equally removed from imminent, bodily danger. However, a consensus of what to do quickly emerged in that case which has not appeared to combat the threats of climate change. This is not a matter of “values” making themselves known in new, objective scenarios, but of the co-creation of values and facts,

5 Ivan Illich: *An Intellectual Journey*, (University Park, PA: Penn State University Press, 2020), 399-400.

6 Beginning with public statements gathered in a book titled, *Where Are We Now? The Epidemic as Politics*. (London: Rowan & Littlefield, 2021).

organisms, interests, and power.⁷

The question imposes itself on us because it is a commonly held position in environmentalist circles that if great change doesn't occur democratically, if it demands unilateral action (which is supposed to only be possible via "fascism" – an unexamined assumption which serves a polemical function to make the idea of change seem impossible), it wouldn't be worthwhile.⁸ Illich expresses disdain for a technocratic management approach to our dilemma when he observes "Man would live in a plastic bubble that would protect his survival and make it increasingly worthless" (116). Now that a "political process" is beyond the reach of ordinary citizens, the choices we are given are apocalypse or apolitical social control, whether fascist or techno-bureaucratic.

However, I suggest we revise the concept of political action on environmental issues, as no longer merely instrumental to some future bliss but rather as itself a mode of good living, as itself a source of meaning. The current situation demands a renewed concept of agency. As Illich did in his later writings, I contend that the sphere of the vernacular represents the best opportunity for effective action which bypasses the binary of doom or tyranny, by elevating the abilities of individual people so that they may make meaningful changes

7 Often, to determine whether "bare life" or "the good life" wins out in a given issue it is sufficient to find out from which one corporate power stands to gain. For example, Big Pharma safeguards our survival at the expense of our higher needs, while Big Oil furnishes our lives with endless conveniences and commodities by destroying the foundation of life. More instructively, we may observe how the locus of the "life" in question, varies with the interests and powers affected. When it is the workers vs. the 1%, "we" are absent from media and policy. When it is the Global South and people of colour vs. the privileged nations and the wealthy WASPS, again, no "we" is to be found. But when it is the elderly vs. the young, the multinationals vs. small, local business, or the work-from-home/vacation crowd vs. the frontline workers and the unhoused, then a "we" is formed that must work together to stop this terrible threat. The construction of a collective whose lives are threatened is obviously a highly selective enterprise.

8 E.g. the discussion by the IPCC experts in Philippe Squarzoni, *Climate Changed*, (New York: Abrams, 2007).

in their environments. And like Illich, I turn to a resource we already possess. I sketch a theory of technique, which I argue is a mode of action that bridges the personal level with the systemic. In the practice of technique, we not only alter our world, but we exemplify what it is to live well.

Snowboarding as technique

In my teenage years, I was an avid snowboarder. Though I could not be said to have achieved mastery, this was my closest approximation to developing technique. In what follows, I shall draw on these experiences as well as examples of technical masters in various domains to examine the nature of technique. The concept of technique provides a link between systems theory (broadly speaking) and phenomenology which, in my view, is one of the only viable philosophical stances that can account for subjectivity, and therefore, for action against the grain. This does not mean it is the only such link. But it is one, because it exposes scenarios in which the individual and the environment are indistinct and, yet, in which the individuality of the individual is paramount. Let us examine how this is the case.

To begin, it may help to distinguish technique from skill and method. Technique is more specific than skill. A skill is an ability that is largely transferable, such as writing or riding a bike, whereas technique is a set of actions with defined parameters, such as writing detective fiction or bicycle racing and bmx tricks. Both the latter require knowing how to ride a bicycle, but no other domain requires knowing how to do a handlebar spin with flair or navigating the hills of southern France among a mass of hundreds of cyclists. A skill can be developed to a greater or lesser extent, as when we say a person is “very skilled,” but technique implies a certain standard; it must be well done to suggest technique, as in “having great technique” or “having poor technique” (the

skill is there, but the technique is lacking).

This in turn distinguishes it from method, which is a program for accomplishing a definite end, while technique suggests a certain art in its execution. Anyone, in theory, can learn the appropriate method for a task, but technique requires finesse, a personal contribution. There can be no predetermined method to achieve technique. It is not end-oriented, but appreciated in itself, as a process. When we admire the technique in a product, such as a painting, a carpet, or a hand-made desk, we suspend our attention to the piece itself and imagine the process by which it was painted, woven, or built. In short, we admire technique *through* the work, though this is, of course, not the only thing we may admire about a work.

Technique and Genre

The parameters according to which technique is assessed, which are both specific and yet admitting of personality, are those of *genre*. A technique is coproduced with a genre. Genre, in turn, emerges from the recognition of those aspects of action which are not solely utilitarian. To be a good driver may be useful to reach a destination, but to be considered as technique is to ignore such aims and to consider the driving in itself. It is therefore common, though not necessary, to formalize venues for viewing technique, such as racetracks, detective fiction publishing, or concert halls. Each of these presupposes a genre and typically involves a mechanism for evaluation and criticism according to the standards of the genre, such as panels of judges prepared to award winners on the spot or critics who later review concerts in the newspapers. In any case, technique bears the nature of performance; it exists to be seen (or heard, or touched, or tasted). Again, the action itself may serve a function, but technique refers to the flair of its execution, which in itself has no function. When I practiced snowboarding, my activity served no purpose, it did

not produce any result. Yet it made visible a way of becoming integrated with a world, and this novel relationship between human and surroundings could in turn be conventionalized, formalized, and assessed. Thus, snowboarding has come to be seen as a genre itself, with many subgenres—halfpipe, slalom, slopstyle—which are presented in various events every year.

If technique leads to prizes and awards, this does not invalidate the idea that technique is not end-oriented. The rewards of a good performance are not a result of that performance, as a house would be a result of building. Rather, they are awarded by peers on the basis of social standards, in the context of contingent ceremonies. In fact, the consequences of technique are retroactively determined: first we develop technique and notice it as worthy of recognition, then we devise means of recognizing and incentivizing it. On a more philosophical level, we may observe that the “ends” served by technique are not those of utility or of need. The difference is captured in ordinary language, as Arendt points out, when we distinguish “in order to” and “for the sake of.”⁹ Those who seek mastery of a technique do not attempt to do the most possible good, nor to put food on the table, but to achieve excellence, honor, prestige, beauty, and so on. These values are the byproduct of human ceremonies that commemorate actions which in themselves have no inherent end.

It should be obvious from these examples that genres are not natural kinds. They are historically situated and developed over time, in accord with the development of technique. The establishment of the criteria for judgment can occur over a period of time via multiple iterations, as is common with sports, or as the byproduct of a work of such originality that it simultaneously creates its own genre, as is frequent in the arts. Borges’ writings on Poe exemplify this phenomenon, in

9 *The Human Condition* (Chicago: University of Chicago Press, 1958), 154.

which he made Poe the founder of detective fiction.¹⁰ This instantaneous production of genre often leads to the misconception that the original is the best and that no fundamental change to the parameters occurs afterward when, in fact, the original is often identified much later in the process of genre-production and frequently breaks the rules it eventually (or ostensibly) gave rise to. Again, one can look to Borges' writings on Kafka.¹¹ This focus on origins also draws a comparison to legal judgment, which in our Roman tradition, depends for its legitimacy on a constitution. However, in neither the technical nor the legal domain is this dependence obligatory. Other legal paradigms are possible. What matters is the institution—formal or informal—that regulates the parameters for accepted judgment, a point to which I shall return.¹²

The coproduction of genre and technique is typically a function of technological innovation. However, it is not so straightforward as that a new technology invites new opportunities for technique. Rather, the first change wrought by a new technology, along with the transformation of the subjectivity of the user, is a pressure over its environment to produce a space for its use. The famous adage that to someone with a hammer every problem looks like a nail, encapsulates this dual movement—from the tool back toward the user and out toward the world. It further illuminates the complex relation between science and technology, at least to the extent that science cannot progress without demanding the implementation of its hypotheses through experiments. The motto of science is best expressed in Robinson's *Red Mars* by the

10 See, for example, "The Detective Story" in *Selected Non-Fictions* (New York, Penguin, 1999), 491-499.

11 "Kafka and his Precursors" in *Ibid.*, 363-365.

12 We should have to simultaneously reconsider the word "institution" which carries this bias toward to the original in itself, in order to creatively reimagine the formalization and regulation of genres.

character who says “we can do it, so we will.”¹³ Technology is not simply the result of scientific research, but its precondition and its process—Galileo’s revolutionary discoveries of lunar cycles were the result of his access to the newly invented telescope. The scientist can only gain the required alienation for investigation by means of technological mediation, and similarly considers the technologization of the world as the method of making it knowable.

The world according to technique

Snowboarding requires a very specific and artificial environment. Natural slopes ideal for snowboarding are comparatively uncommon, particularly if one is performing a “tricks” style of snowboarding. My friends and I used to spend hours carving ramps out of plywood and snow to be able to practice our craft on small suburban hills. So too, cars and bicycles require smooth surfaces to function, at least to their maximum (imaginable) potential. It follows that their invention calls forth a paved world.¹⁴ Likewise, computer technology needs a wired world to sate its insatiable appetite for energy and to realize its potential for instant communication.

It is, strictly speaking, not the technology with which the user interfaces, but the world through the technology. As with any mediator, technology acts as both revealer and concealer. Consider the word ‘screen,’ which refers to both that on which something distant can be projected and that which can hide what is right in front of you. Each technology poses problems to the user, as a snowboard would be a burden to someone who did not know how to use it, or who

13 Robinson, Kim Stanley. *Red Mars* (London: Voyager, 1996), 213.

14 The social implementation of a technology will therefore often require the simultaneous development of other technologies as is the case with cars and asphalt. Who can say how many inventions are already now just waiting their environmental counterpart to re-paint the world?

tried to use it to go uphill. Nevertheless, the environment can change without technological innovation or through a technology unrelated to the technique in question, such that a new technique is born using older technologies as a means of interacting with this new world. A familiar technology may become an impediment in such a case, at least until a new technique is used to adapt it to the new world. Poe's founding of the detective genre did not require a new technology, but the world had changed sufficiently that the baffling mystery and secrecy it presented to the average person required a new literary mode to represent it.

Technique intervenes at this stage, providing the mode which enables one to use a technology to breach the gap between oneself and the world, to make most use of the environment, and at its most exalted, to expose a new way of being that was somehow always possible. It is the opposite of the scientist's approach to technology. The technical master interposes technology between him/herself and the environment, not to remove his/her personal involvement but instead to become contiguous with that environment, to become integrated with it, and to *make changes* in it. And so, while technique is non-instrumental, it does require instruments. In this case, the tool is not so much a device for appropriating the environment as knowledge or as a resource, but a way for the user to interact with the environment with ease. As anyone who has excelled in a technique can attest, it provides an experience of *seamlessness*. Above all, technique is a means of integration between the individual and the environment.

The process of learning how to navigate the mountains with a snowboard involved several recalibrations of my sense of balance, the development of unused muscle combinations, and many tailbone injuries. Eventually though, on my snowboard, I could traverse this environment with ease. Without having to think through the chain of cause and ef-

fect, I could make decisions on the fly; to decide where to go and what to do was at the same time to start doing it.¹⁵ The acquisition of technique involves a kind of training by which the body is formed to ultimately be transcended. The body must be made highly present in the process of learning. Its instincts and habits must be surfaced before being deconstructed and replaced with new ones. Finally, upon achieving technical mastery, the body becomes ‘transparent’. The master can express his/her will without any thought given to the series of actions involved, proceeding smoothly and directly from thought to result. The result is “making it look easy.” It follows Elaine Scarry’s logic by which the presence of the body makes the world absent and vice versa.¹⁶ Technique allows one to ignore one’s own body to meet the world, as it were, directly.

In short, the parameters of a technique create the arena in which the will can be exercised. There is an intimate connection between the establishment of rules and creativity. In the Midrashic tradition, it is common to thank the Lord for the commandments. The divine rules are a great gift and likened to a wife. It is difficult for contemporary liberals to understand this deeply felt love for restrictions, but they make sense when one considers just how much of the intellectual and artistic tradition of Judaism, not to mention its legal and religious traditions, revolve around playing with these rules, interpreting them, trading them, blending them. Certainly, nothing impressive could be achieved in chess, in poker, in football, in literature, or in dance if there were no

15 A more radical description of this process is given in Tom McCarthy’s *Remainder*. Someone who has received a traumatic injury who must relearn basic actions from scratch, including walking and eating carrots. As a result, he becomes fixated on experiences of seamlessness as depicted in movies and in nostalgic reminiscences. We might construe this experience as that of someone who has lost even the techniques of basic functions.

16 See *The Body in Pain* (New York: Oxford University Press, 1985), 33-34.

rules to create conditions and obstacles.¹⁷

Technique and climate change

The analysis so far may hopefully be amenable to multiple projects. However, I want to focus this inquiry on how technique relates to the question of political action in the context of climate change. The major point to make is that not only our political action but also our modes of relating to the environment cannot be taken for granted. They are not inherited in the way birds know to migrate at the change of seasons but require a challenging process of unlearning some basic instincts and acquiring new skills. This pedagogy, furthermore, occurs at the individual level, and must be re-learned with every generation. Technique is the name for the mutual transformation of organisms and their environments but viewed from the perspective of the particular, self-conscious organism. Contrary to the ecologist's view, it reveals the extent to which this calibration is not a given. If it were, we would not celebrate it, without concern for its usefulness, by setting up fora for its display and assessment.

Dipesh Chakrabarty has traced the history of understanding natural and human history as separate, and suggests that anthropogenic climate change breaks down this barrier.¹⁸ The traditional humanist view held that human history could be understood because it was the product of our actions, whereas natural history was impenetrable because it was either created by God or uncreated. Nature was believed

17 I have so far emphasized technique as a bodily and tool-based activity, but this begs the question as to the place of so-called intellectual techniques. It is unclear, for instance, whether language is a tool in this sense. Moreover, can there be a technique for thinking? At present, a fully elaborated analysis of techniques of thought is beyond the scope of this paper.

18 Dipesh Chakrabarty (2000), "The Climate of History: Four Theses", *Critical Inquiry*, 35(2), pp.197-222.

to have “no inside”.¹⁹ Chakrabarty suggests that the agent of anthropogenic climate change—the human species—is a negative universal, that is, an abstraction about which we cannot effectively think. The human species is an emergent category for describing the combined actions of all individual human beings, yet we can have no sway or control over such an abstraction. But neither have we any sway over global human history. Rather, the fields in which we can effectively influence history have always remained rather limited. They consist of micro-systems carved out of the surrounding, inflexible conditions of the world, both human and natural. Natural history has not become something made as human history was thought always to have been; rather, human history and natural history become equally changeable, yet equally beyond control. Thinking through climate change disproves the theory that we could ever understand world history, while making clear the ways in which our interiority can meet the wider environment in limited, but important ways.

The now collapsed distance between natural and human histories has led thinkers to attempt to reduce the distinctions between human and other living beings. In particular, they argue that all beings possess interiority, or else that none do. For as humans we observe species behaving in consistent and reproducible ways, so to say that such action is self-conscious is to assume that our own self-conscious actions are equally deterministic. Some major currents of thought today, such as actor-network theory (ANT) and post-humanism, appear to equate form with ability, such that a given *kind* of actant can only and will always perform only those actions appropriate to its kind. But an organism capable of learning and being taught is one in which form and ability are discrete. Technique must be learned. The individual must be taught to rewire its body and its language to participate in the environ-

¹⁹ Ibid., 202.

ments that have been altered, and its capacity to do so is heavily variable. In my view, we must stand our ground on the fact that humans have an inside, yet remain agnostic as to whether (all) other beings do and to what extent, or at least until we communicate with them.²⁰

The concept of technique clarifies how an actant can change from an intermediary to a mediator, in Latour's terms.²¹ An intermediary is a mere vehicle in the transmission of forces, involved but essentially passive. It has no say in *how* a force will be directed through and beyond it. By contrast, a mediator is an active participant in material-semiotic exchange. It is not sovereign, as it does not generate forces from itself, but it is a co-creative participant in the system that emerges from the concerted and conflicting actions of all mediators involved. In Latour's view, this distinction is perspectival—we either acknowledge *all* actants as mediators, or fail by thinking of them as merely intermediaries. In contrast, by my analysis, the distinction is a function of the relative technical abilities of each actant in a given environment.

An important component of this view is that the same entity can be both mediator and intermediary depending on which environment and forum it finds itself in. The world is not one system, but an infinite and changing array of systems within, adjacent to, overlapping, and in conflict with one another. Michel Callon's study of framing in the practice of accounting sheds some light on this phenomenon, showing how subjects selectively, and not always "rationally", choose

20 "If a lion could talk, we could not understand him." Ludwig Wittgenstein, *Philosophical Investigations* (Oxford: Basil Blackwell, 1978), 223. I do not agree that humans are the centre of the world, or possess the highest or only mode of consciousness that exists. Rather, I think that, since I am a human being, I can only think as a human being. Therefore, I must limit my understanding according to the limits of my physiological form, just as I further limit it by my historical and cultural situation. I can trust that other forms of life will act responsibly, intelligently, and so on, but I can only expect to reach other human beings in my appeals for them to do so.

21 Bruno Latour, *Facing Gaia*, Polity Press, 2017, p.71. n69.

what to include and what to exclude in any given accounting system.²² A part of the analysis of systems must include the subject's own acts of framing by which it determines which techniques to employ, to judge, to separate or to conflate. *It is only in creating these frames and in acting within them that people are capable of transcending the determined course of action derived from their species being.* Our lives are composed of multiple nested spheres of engagement. So no one is master of all, and absolute power is nonsensical.

The imperative of industrial society is to reduce, as far as possible, people into intermediaries, by eliminating the value of technique or relegating it to specialized and benign arenas like professional sports. Incidentally, it is worth considering whether the highly paid nature of these “professions” is a means of further removing technique from everyday life and pacifying its practitioners to prevent them from carrying its lessons into other spheres. Increasingly, jobs boil down to pressing buttons to enable machines to carry out pre-scripted operations. Creativity is distilled up to the privileged few, like bubbles rising to the surface, where it is primarily used to devise ways to further reduce the input required of “users,” who are paid correspondingly. In the name of utility and efficiency, agency is systematically removed from the majority of people and non-human beings, in both the formation of subjectivity and the material organization of the world. It is no surprise that the only relationship to rules maintained by many people today is as constraints, and that creativity consists in finding ways to break them.²³ For example, consider the rise in popu-

22 “An essay on framing and overflowing: economic externalities revisited by sociology” in Michel Callon, *The Laws of the Markets*, John Wiley and Sons, 1998. See also, Michel Callon *Markets in the Making: Rethinking Competition, Goods, and Innovation*, Zone Books, 2021.

23 Progressive education bears some of the blame for this situation. For one, it has consistently deemphasized the body. As Ursula Franklin was known to point out, despite all the moralizing to the contrary, we live in the least materialist society of all time; the one thing our leaders and teachers do not understand is materiality. Further,

larity of street racing, drug dealing, hacking. Under such conditions, democracy is a joke.²⁴

The restoration of agency demands a rejection of these false alternatives and the restitution of spheres of engagement in which individual character is foregrounded, the stakes are real, and technique is necessary. I noted above that the arenas for the performance of technique are upheld by institutions. Politics, the domain of appearance *par excellence*, according to Arendt, is no different. Contemporary politics consists of highly conventionalized and controlled performances: broadcast addresses to the nation, smiling-heads-of-state-shaking-hands photo ops, candidate debates. The behind-the-scenes action is no less institutionalized, though its audience is different. In that case, it is a matter of impressing lobbyists, influencers, funders, interest groups, and one another. But is it truly just *circuses* that, together with an increasingly limited allocation of bread, is meant to distract us while democracy is slowly subverted? It is well-known that politicians are all liars and that campaigns are a series of staged and contrived enactments. One avenue for action is to enter this field and use it to open up formal democracy once more and to institute policies to support the future thriving of people and the non-human world alike.²⁵

by taking for granted that the self-directed education of the child will ensure an “un-oppressive” and fulfilling development, it excludes the training in submission which is required to become a creative participant in any system.

24 Or worse, an evil. Here is a telling story: In an undergraduate seminar on medieval philosophy, I found myself struggling to understand the version of free will articulated by these thinkers. Increasingly frustrated, I tried to get my professor to explain this idea in what I thought were “concrete” terms, i.e. how it works when an individual is offered this or that choice. In response, my professor exclaimed, “My dear, those are *sins!*” Freedom has as little to do with choosing one commodity over another as does the good.

25 For instance, by cracking down hard on the real estate speculation market.

However, the greater part of our current needs lies in developing a parallel set of institutions where technique matters and climate-conscious activity is valued. To establish modes of integrating with the environment that do not involve widespread catastrophic environmental disaster requires establishing venues, fora, parameters, conventions, rules, etc. which not only make sustainable activity possible, but in fact incentivizes it, by appealing to the higher needs of honour, fulfillment, meaning. By creating spaces that are removed from the logic of the market and the state, more people may be convinced to shift their activity to these zones. Of interest are, of course, the kinds of activities Illich examined: education, medicine, transportation, manufacture, and agriculture. If activities in these domains can be viewed as more than merely utilitarian, but as requiring and demonstrating levels of technique, we might be more willing to value other ways of undertaking them. And in turn, we might find we enjoy the practice of them, rather than viewing jobs as a means to gain leisure time to enjoy entertainment or distraction.

Formal, industrial institutions have little to offer us anymore in these domains. They pit us against each other to produce poor-quality goods and pollute the biosphere in the process. By establishing our own, self-organized versions of these institutions, and simply turning away from their mainstream equivalents, we can once more enjoy the process of being technical, of being mediators, and of being agents in our own lives. Illich had a name for these modes of action: the vernacular, which is “not an alternative to anything but an ever-present reality at hand.”²⁶ Though this transition would require some concessions, notably a reappraisal of the value of enoughness and a commitment to stabilizing imperfect institutions, in my opinion the benefits would

26 Sajay Samuel, e-mail communication, September 5, 2023.

be worth it. As in any technique, a return to the vernacular would reveal a domain enjoyable and worthy in itself, while its form—political economy—would gear its stakes toward the material necessities.

Renewing *La Convivialité*, a half century later

by Giovanna Morelli

Forgetting

We seem to have forgotten the questions raised fifty years ago by Ivan Illich in *La Convivialité*¹. Yet, we face them again today with a renewed sense of urgency. To adequately confront the new provocations to which humanity itself is now subjected, we need an anthropology that clearly traces the *a priori* of the human phenomenon and unveils its ethical horizon. Fifty years ago, Illich imagined a possible future that is uncannily similar to our present:

It may be that the technocrats are responsible for leading the flock to the brink of the abyss [...] Such a suicidal fantasy would maintain the industrial system at the highest level of productivity that is sustainable. Man would live protected in a plastic bubble.²

He further foresaw that to overcome human resistance to programming and manipulation:

science and technology would focus on equipping the human psyche. From birth to death, humanity would be confined in the permanent school extended on a world scale, treated for life in the great world-wide hospital and

1 For this article, I rely on I. Illich (2005)., *La Convivialité*; in *Oeuvres complètes, I*, (Paris: Fayard, 2005).

2 I. Illich, *La Convivialité*, cit., pp. 569-570. (Il se peut que les technocrates soient chargés de conduire le troupeau au bord de l'abîme [...] Une telle fantaisie suicidaire maintiendrait le système industriel au plus haut degré de productivité qui soit endurable. L'homme vivrait protégé dans une bulle de plastique).

linked night and day to implacable chains of communication. This is how the world of the Great Organization would function.³

If on the one hand Illich saw far ahead, on the other hand he seems to have erred in being too optimistic in thinking that “the previous failures of mass therapies also give hope for the failure of this ultimate project of planetary control.”⁴

Fifty years ago, the widespread sense of impotence was a sign of the silence of parties, legislative bodies, and the judiciary who were trapped by the logic of infinite growth. At that moment of systemic crisis (which Illich thought was looming), influential minorities and custodians of radical research could have guided the world’s majorities. The coming to awareness of the addicted masses could have occurred suddenly. At that time, Illich spoke of the possibility of a surprising revolution capable of impacting the Law and negotiating proscriptions on a global scale to keep technological development below critical thresholds. Half a century later, though the system still hasn’t imploded, it has become more and more chaotic in the sense that there is no global coherence or agreement in either values or understanding. The demands for social and ecological justice now crash against the “soft resistance” of this ethical and cognitive chaos. Our militancy and resistance are both visible and invisible. The feeling of helplessness has worsened.

We now need a pact between the great secular narratives and the new narratives, one that remembers and is open

3 Ibidem. (La science et la technique s'attacheraient à outiller le psychisme de l'homme. De la naissance à la mort, l'humanité serait confinée dans l'école permanente étendue à l'échelle du monde, traitée à vie dans le grand hôpital planétaire et reliée nuit et jour à d'implacables chaînes de communication. Ainsi fonctionnerait le monde de la Grande Organisation.)

4 Ibidem. (Pourtant les échecs antérieurs des thérapies de masse laissent espérer aussi la faillite de cet ultime projet de contrôle planétaire.)

to the many layers of reality and to the complexity of man. The *a priori* of the human phenomenon and its ethical horizon which we have forgotten was well described by Pico della Mirandola. In his *Oratio de hominis dignitate* (1486), Pico imagined Man as God created him—a being who can make himself what he wants to be. Man conceived as self-made, implies man who can fashion himself in the manner of his choosing, free to degenerate into a brute or to rise towards angelic virtues. Modern psycho-anthropological research has confirmed the existence of a human *gestalt* in the form of individual self-awareness and self-fashioning. However, the freedom for such self-fashioning that allows us to recreate or destroy ourselves cannot exceed certain limits. The practice of virtue blossoms only *between limit and freedom*. The art of good living does not claim unconditional freedom but practices a grateful and harmonious interaction with natural laws and the mystery of man and the world. Everything that pre-exists us has its laws (intrinsic forms of Being) and transcends us in the mystery of genesis. The cosmos, the great pre-human work, is the *sacrum* that can dampen our feeling of creative omnipotence. The very existence of man, renewed by every act of procreation, is not only due to man. We can therefore interact harmoniously with the “open work” that we are, within the limits of our body, with the depth and the many voices of our psyche, urging body and psyche into active processes of transformation and integration. We can interact harmoniously with the other great “open work” to which we belong, the work of the world, which binds every man to other men, and binds all men to nature. It is an integral interaction: both scientific and technological as it is philosophical, artistic, aesthetic, and mystical.

In this *balanced ethical anthropocentrism*, the centrality of the Human is not a question of omnipotence but a question of perspective: we look at the world from our point

of view and the world is arranged, inevitably, around us as the center. Preserving this ability to “be the center” is our first requirement. To be the center means to become a self-aware mirror of the great pre-human frame, the reality of the *sacrum*. To be the center also means to be able to modify the frame and to imagine a meaning that balances pre-existing laws, freedom, and mystery.

Every man is this center and individual separateness is the foundation of our condition. However, his separateness can only survive through relationships between humans. We owe our lives to those who gave birth to us and to those who are our custodians in our last days. We owe the materials of personal self-shaping to shared stories and plural experiences. The “we” who pre-exist is given, more or less restricted, localized. But unprecedented partnerships of individuals generate a new “we”, beyond the “hereditary.” We have the individual faculty of belonging freely, up to universal belonging. The universalistic approach of ethics-the existence of Each in the existence of the Whole-is enabled and made necessary by the worldwide connection of our times.

The “common good” that is our Humanity brings us together in the difference of our identities. The horizon of maximum inclusion, the planetary horizon, safeguards the right to diversity and equal dignity for all humans. The particular is thereby saved in the universal. And the universal acquires truth in the concrete ethics of every encounter between persons. The failure to recognize this “pluriversalism” is the history of fratricidal extermination that we carry from the past to the present: the history of injustice, prejudice, discrimination, and oppression.

Descending

The affirmation of this “common good” of the Human is necessary in the face of the historical *novum*: the mass ex-

termination of the species by weapons of mass destruction or some scientific or technological dystopia which threaten to erase human virtue and freedom itself. Such dystopias are the result of the systemic chaos we inhabit—they are the climax to drift in values and knowledge. For instance, according to current cognitive neuroscience, the problem of free self-determination can only be comprehended in a scientific context. If one accepts the conclusions of such a “neurobiology of the will”, then the freedom of human decisions is an illusion and a myth which helps us accept life. Decisions are nothing more than the products of the brain’s electrochemical machinery. Similarly, the grotesque transhumanist paradox—product of emerging and converging technologies (NBIC Nanotechnology, Biotechnology, Information technology, Cognitive science)—promises the absolute freedom from biology by transforming man into a machine. But this transhumanist leap was already prepared for by the grotesque perversion of universalism in the form of economic and technocratic globalization. In fact, in the name of freedom, the scope for freedom and virtue is already diminished by the increasing dependence on digital technologies and the expanding use of social robots.

In *La Convivialité*, Illich had identified the over-equipped, dependent, and compliant man as a man disabled from the practice of virtue. Today, this kind of being is the accepted model of man, both offline and online. The new interactive and reticular structure of the Internet establishes the radical hyper-monopoly that mediates every aspect of life. It is the apotheosis of services, the “planetary service”, the realm of global advertising. All is provided through the Internet: medical treatments, education, information, entertainment, sex, politics, gymnastics, commerce, friendship, spirituality and even self-discovery through self-branding. We know that the network experience is not neutral: shapeless, promis-

cuous, and unlimited, it reproduces and amplifies systemic chaos and threatening, above all, the reality principle. The Internet appears to offer a space for each to be heard only to be dominated by the incessant babble of disincarnated voices. The invitation to create on the Internet actually captures human creativity in the pop system of the market conditioned by “likes” and trending topics. Frustration, disorientation, and malaise are treated with more or less expensive palliatives, including massive doses of “influencers”, which increase the total amount of manipulation and acquiescence. Equally, the seeming refuge of the “echo chamber” where tensions are relieved in aggressive polarizations do not destabilize the whole but rather strengthen it. For the supposedly lucky ones, the virtual cyberspace of the Metaverse is offered as real refuge. The vicious circle is thereby evident: the apparatus of chaos attacks the very lucidity, sensitivity, and realism that are necessary to contest it.

Beyond our induced disabilities and our systemic masks, virtue can resist only to the extent it can. “The larger human matrix that supports each individual human life”⁵ remains a latent force that is more or less inhibited. In the absence of personal discernment, systemic chaos favors the worst “contents”, and the worst psychic and mechanical automatisms. Our perceptions are mediated by helpful apps with which we gain control over various digital tools like smart assistants and home security devices that, in turn, control us. Sympathetic GPT chatbots, which we insist on calling “artificial intelligences”, take over our most delicate and creative tasks including composing works of art and literature. Social robots care for the most vulnerable, offer psychological assistance, and companionship.

5 I. Illich (1976) *Limits to medicine – Medical Nemesis: the expropriation of health*, (London: Marion Boyars, 1976), p. 153.

The outcome of this tendency could be suicide. Disabled and disoriented man, plunged by the techno-system into the chaos of himself and the world, can only find refuge in his post-human opposite, the cyborg, the perfectly programmed device. The question “what does it mean to be man” in the presence of an invasive impact with the realm of “things” had never been asked before; nor have we ever seen such virtual and complex “things”. The new tools could bypass our conscious experience, short-circuit the exercise of virtue and freedom, thereby dramatically reducing the distance between man and thing. The technically enhanced superman could include a device to directly download information, a remote-controlled pacemaker for mood optimization, or a mechanism for erasing memories with laser techniques. The Human Brain Project—creating an “atlas” of the entire human brain—was completed by 2023. The final aim is to fabricate a completely disembodied human mind, reduced to processes that can be objectified and transferred to the mechanical nature of inanimate matter. “Certain post-humans could even decide to get rid of their bodies and live inside supercomputers, taking the form of pure information.”⁶ After genetic manipulation, cloning, sperm banks and surrogate wombs, with Mind Uploading we will finally be able to die in a digital tomb. The latest invention in the artistic field is post-human music: the neuronal cells of a deceased composer were grown in vitro to create notes using a machine that decodes their impulses.

The technically enhanced superman, competing with the “super-intelligence” of machines, treats himself as one of his own automatons, and treats his own automatons as himself. Hiroshi Ishiguro, the great creator of androids, has produced an android copy of himself. He has named it *Geminoid H1-1*, after the Latin *Geminus* for twin. His goal is

6 Transumanisti.it ; Faq WTA 1999.

to create an android that can convey the feeling of being in the presence of a human being – what the Japanese call “sonzaikan.” According to him, people who know him have felt his presence when they interacted with Geminoid H1-1. To protect such “electronic personalities”, the bioethicist George Dvorsky has dedicated a specific bill of rights, a new *habeas corpus*: the right of machines not to be suppressed, not to have their software modified against their will (!), the right to privacy of their mental states (!) and the right to replicate themselves. Robots will thereby be considered a new species, welcomed by their makers into the *pantheon* of living and sentient creatures.

Those who defend robots, usual accuse the doubters of being narrowly anthropocentric. These skeptics are charged with first having discriminated against animals and plants and now discriminating against our android little brothers. Contrarily, man’s most anthropocentric act is precisely that of not recognizing any *sacrum*, to the point of wanting to overturn the categories of Being and manipulate the processes of genesis. Robots and cyborgs invite us to abandon every old “humanistic” certainty, which is now described as a prejudice or mental inflexibility. At the heart of this defense lurks a sort of “umanfluid” prototype, a mutant prototype of which the “antiquated” spirit/flesh human couple is merely type. In defending cyborgs or post-humans, transhumanists are improperly using the ideological paraphernalia of pluralism. In fact, the pluralistic defense of “differences” applies strictly within the bio-psychic field, which the cyborg difference seeks to escape.

The cybernetic mutation of one’s being is claimed as a new individual right, under the heading “technological rights”. A historic declaration by the *Italian Transhumanists Association* cited “the golden rule of liberal democracies: every man is free to do everything that does not limit the

freedom of others. Becoming a cyborg is a decisive progress in the evolution of the species, the result of rationality and not of chance.”⁷ What escapes this “rationality” is the existence of a *common heritage of humanity* which cannot be violated beyond a certain threshold, even in a single individual of the species, without calling into question everyone’s way of being (my life is mine, but my “humanity” belongs to everyone).

A basic ethical choice is at stake here: the choice between the *ethics of metamorphosis* (transformation in continuity) or the *ethics of mutation* (transformation in discontinuity). The choice is between the evolution of *man* and the evolution *from man*. Thanks to his capacity for self-determination, man can decide to technologically break down his own limits and at the same time his own freedom, in exchange for liberation from malaise, fatigue, and wickedness. The aim is to break the autopoietic autonomy of the human *gestalt* and replace the virtuous arts of the soul with the certainty of cybernetic manipulations. As Dostoevsky’s Grand Inquisitor reminded Jesus⁸, men fear freedom from the fear of losing control. At the basis of every ethic of mutation, of every Promethean excess of technical power, there is weakness, emptiness, and impotence in the face of the experience of evil. In other words, the desire for complete control is prompted by the lack of arts, philosophies, rituals, community and love... in a word, suitable virtues. Perhaps it is the very effort required for virtue that frightens. Perhaps we don’t know the virtue that liberates but only the one that represses. We do not know the virtue that enlivens but only that which mortifies.

7 Transumanisti.it; *Sarò Cyborg*, “La Repubblica” 26 febbraio 2005.

8 F. Dostoevsky, *The Brothers Karamazof*.

Renewing

We can respond to this oncoming descent of man into machine with the resources of what we will call the *culture of proportion*. The culture of proportion knows how much joy (and not just how much harm) can come from our faculty of self-shaping, when this is conducted in a proportionate way: a harmonious taste, a fluid, imponderable wisdom, completely embodied and personal. This wisdom—guarantor of our own freedom—demands our joyful asceticism and rewards us with the joy of the proportion between flesh and spirit, between nature, culture and technology, between person and person, between individual and community, between knowledge and mystery. The culture of proportion practices a “critical acceptance” of human limits and a corresponding implementation of technologies, shaped in the broader and indispensable context of our virtues.

We are accordingly taken back to *La Convivialité*. That text was a radical examination aimed at identifying the counter-productivities of technologies that exceeded certain natural scales, and the related psychologically critical tolerance thresholds.

The thresholds beyond which destruction looms do not determine the range of degrees to which a society voluntarily limits the use of its tools. The thresholds outline the field of possible survival, the limits of the range represent the closure of a culture [...] The need to determine thresholds and not to cross the limits thus defined is the same for all societies.⁹

9 I. Illich, *La Convivialité*, cit. p. 544. (Les seuils au-delà desquels se profile la destruction ne déterminent pas la fourchette des degrés auxquels une société limite volontairement l'usage de ses outils. Les seuils dessinent le champ de la survie possible, les limites de la fourchette figurent la clôture d'une culture [...] La nécessité de déterminer des seuils et de ne pas franchir les bornes ainsi définies est la même pour toutes les sociétés.)

In the new draft of the text for the French edition, following the English one, Illich inserted a clarification we need to reflect on:

These natural scales are capable of identification, without claiming to be able to say something about the nature of man or society. These scales define in negative and proscription terms the space within which the human phenomenon can be observed. But they do not contribute in any way to saying what nature this phenomenon is, any more than they formulate any prescription.¹⁰

However, it is certain that Illich provides us with an anthropological characterization in terms of creativity, virtue, and self-shaping—a truly universal characterization, unlike the fictitious universalism of many cultural “colonizations”. Each threshold denounces the technological excess detrimental to essential human values. The human balance will be able to be reestablished, according to Illich of the 1970s through a reappropriation on multiple fronts: reappropriation of the environment, of autonomous and self-destined initiative, of metabolic energy, of knowledge, of the power to influence Law, of historical dialectics, and community solidarity.

Decades after *La Convivialité*, and after having acutely theorized “the age of system”, Illich invited us to transform our powerlessness into our new wealth. Reconnecting with oneself is the best way to sabotage the system. The tracing of natural scales is replaced by personal attention to proportion. The normative variety of traditional cultures, the many lifestyles of the vernacular corners, largely belong to the past. What can be reborn is an individual and shared variety, ac-

10 Ibidem. (Ces échelles naturelles sont susceptibles d'identification, sans qu'on prétende pouvoir dire quelque chose de la nature de l'homme ou de la société. Ces échelles définissent en termes négatifs et de proscription l'espace à l'intérieur duquel le phénomène humain peut être observé. Mais elles ne contribuent en rien à dire de quelle nature est-ce phénomène, pas plus qu'elles ne formulent de prescription.)

according to the values of a radical anthropology, witnessed face to face in the daily commitment of life. In the ethical tension between particular and universal, we can thus honor our belonging to that human condition which is both our mother and our daughter.¹¹

11 I thank Samar Farage for her friendly and precious editing.

The Language of Public Goods*

by Henry Zhu

Is language itself a public good?¹ We can't easily exclude anyone from learning or communicating in one. Being able to speak a language doesn't limit anyone else's access to it; the whole purpose of it is to speak with others. Nor can we really stop the creation of new slang, dialects, or new languages. We might even say that this innate freedom to proclaim and enact new ways of life, starting with language, is what creates culture itself.

While language itself may not be controlled, we do find ways in which it is flattened. We dampen the complexity of thought through a desire for efficient speech; the uniformity of a lingua franca² whether for trade, administration, or religion, crowds out personal variants and local dialects. Schools may enforce a certain kind of proper speech or writing through standardized tests. Every medium of expression can be formalized into its own muzak: we learn to parrot a homogenized “news anchor voice”, or more recently, a YouTuber/TikTok one.

Language can become monotonous, even at the level of words. Tech monopolies with enough reach can replace previous verbs. After all, ‘to google’ now means to search.

* Originally published online in 2021 at <https://gitcoin.co/blog/seeking-a-new-kind-of-public-good>

1 Typically defined in economic terms as non-excludable, non-rivalrous.

2 “Once you overcome the one-inch-tall barrier of subtitles, you will be introduced to so many more amazing films” - Bong Joon Ho

Some words such as progress, value, and even life³ have transcended all reasonable limits to become plastic words.⁴ Their malleable use by those in power expands their connotation (what it implies) so as to lose all denotation (what it refers to). Advertisers, corporations, and politicians justify and camouflage their actions with these linguistic ego⁵ blocks: Why not go ahead with my strategy? Don't prevent The Future! Why stop Progress? We are moving forward!

The prevalence of this kind of thought in the tech industry is worth a second look. The notion that software has eaten the world produces a fatalistic worldview— 'there is an app for that'—where the idea of *inevitability* becomes its own self-fulfilling tyranny. Big tech cannot wait to convert every externality into value. "All jobs will be automated", "code is the new literacy", "self-driving or meta-verse is happening", and "Bitcoin solves this" are attempts to fashion reality by proclamations.

Why try to bring about (or stop) what will happen anyway? Why think critically about what is happening? If neither helping nor hurting the cause can change progress, what is left for us to think, much less do? Yet, as Marshall McLuhan noted, "There is absolutely no inevitability as long as there is a willingness to contemplate what is happening." Why do we think we have the authority, that level of power and control over the future? When we believe that something is inevitable, we give up our agency to the prophets.

However, if we contemplate what is happening and, following Marshall McLuhan, consider media technologies

3 Illich gave a talk to a group of ministers where he boldly proclaimed: "to hell with life". (<https://www.davidcayley.com/podcasts/2015/4/19/life-as-idol>)

4 See *Plastic Words* by Uwe Poerksen (Penn State University, 1995). I know I used plenty of these in this essay. Also, the opposite approach of removing all ambiguity, like doubleplusgood in Newspeak, seems to end up with the same issue, a loss of meaning and voice.

5 This is an intentional typo!

as both an extension and amputation of ourselves that creates a whole new environment in which we are immersed, then we are called to understand the societal implications of these tools. When technology becomes a part of us, it becomes hard to understand. We take it for granted, as we do our own physical bodies. Whether it's language that gives voice to our inner thoughts or any other tool, seeing them as a form of technology may be a helpful lens to understand their impact on the world. We could then subject media and digital technologies to the same kinds of inquiries we've made of technologies throughout time.

When we uncritically accept technology, we tend to treat it as inanimate blocks, as standing reserves⁶ simply waiting to be used. In contrast, L.M. Sacasas reminds us of the ethical nature of our artifacts which allows us to pose a series of questions concerning technology.⁷ The things we create are not neutral. It seems difficult to ascribe the same degree of responsibility to a pencil pusher and a bomb thrower. But this also means thinking beyond whether something is simply good or bad, and understanding that how we live with technology is a mutually shaping relationship. As the saying goes, "we shape our tools and thereafter our tools shape us." For example, we can ask: in what ways does Google Maps change our experience of time and place, our relationships to people, or even ourselves?⁸

In the 1970s, Ivan Illich was already pamphleteer-

6 Heidegger uses this term to speak of how tech creates an enframing of the world as subject to our whim (<https://www.thenewatlantis.com/publications/understanding-heidegger-on-technology>). And checkout Wilmot's Warehouse for an interesting video game about pattern matching warehouse objects.

7 <https://theconvivialsociety.substack.com/p/the-questions-concerning-technology>

8 Like how we relate to strangers; we used to ask for directions when lost (not that we need to go back).

ing the social effects of our tools.⁹ As a radical,¹⁰ he spent much of his life exposing what he called the “certainties” of our time, our unquestioned assumptions, our sense of reality. Who, if not what, defines this for us? Many technologies have opened paths for expression: the printing press for books, *Flash* for animations, *You tube* for videos, *Unity* for games. But who gets to decide what gets changed in a platform? Even setting aside trust, can any developer really balance their goals against their community’s input?¹¹ Platforms can’t help but act like controlling parents that smother us with love (this is for your own good), acting in some cases more like carpenters than gardeners.¹²

Illich recognized how computers were already doing this, beginning with becoming the root metaphor of contemporary existence (inputs and outputs, modular components, zeros and ones). Illich even foresaw a future in which we would change ourselves to match the inputs of our tools: “the new electronic devices do indeed have the power to force people to ‘communicate’ with them and with each other on the terms of the machine.”¹³ What are we giving up by living on the terms of the computer? Do we any longer understand

9 Paradoxically, Illich’s *Tools for Conviviality* was an inspiration for Lee Felsenstein, one of early developers of the personal computer.

10 Fitting for the role of a historian, one that goes to the *root* of things! from Latin *radic*-.

11 This tradeoff comes up in standards. My experience on Babel (<https://babel.dev>) gives me the sense that it exists to democratize language design (<https://podcast.babeljs.io/preset-env>) in JavaScript via TC39 (the standards body known as Technical Committee 39). It bridges the gap for users to try out experimental syntax, whereas projects (understandably) may not want to implement what will inevitably change or be discarded. Fears arise that making it too easy to create your own syntax may open up a Pandora’s box of bad ideas unto GitHub, so most of the design should be left up to the experts, which I’ve addressed in <https://increment.com/open-source/open-source-of-anxiety>.

12 <https://theconvivialsociety.substack.com/p/children-and-technology>

13 From *Silence is a Commons*. We increasingly “interface” with bureaucratic systems, automated callers, chatbots, AIs on their terms. Like how we learn to use keywords rather than use natural language to search, or tweak GPT-3.

the distinction Illich draws between communication and speech as in the following sentence? “You may not interact with me, nor do I wish to be downloaded by you. I should like very much to talk to you, to stare at the tip of your nose, to embrace you. But to communicate – for that I have no desire.”

ABC: Shaping the Mind

We use means to accomplish some end. But means may become an end in themselves. Illich’s term, radical monopoly, best describes what happens when tools attain power without limit. Radical monopoly does not mean the domination of any single brand (Tesla), but the domination over social need by the commodity itself (cars). Radical monopoly is visible when you drink Sprite to “obey your thirst.” That was his general critique of technology presented in his pamphlets on schools, medicine, and transportation.¹⁴

We might say Illich was a paradox: a teacher who disliked compulsory school, a rebel who remained a Catholic priest, a critic of cars who traveled widely. But he didn’t believe that any tool was inherently bad. Instead, he recognized that there was a threshold beyond which an institution becomes so large that it does the opposite of what it intends, that it frustrates its own purposes. In this way, the school turns into a substitute for learning, cars become a substitute for walking, the hospital a replacement for healing. Each of these technologies are perfectly valid, but they start to harm when they crowd out all other possibilities. These means become counterproductive when they foster the belief that there is only one way to accomplish things,

14 “After these years, plastic had replaced pottery, carbonated beverages replaced water, Valium replaced chamomile tea, and records replaced guitars.” – (*The Right to Useful Unemployment*). Illustrative of his critique is the hidden curriculum of all schools which is “...to confuse teaching with learning, grade advancement with education, a diploma with competence, and fluency with the ability to say something new.” (*Deschooling Society*).

namely their own way. Hence, he cared about balance, the recognition and acknowledgement of limits.

Think about the classic example of induced demand, when those that build the highways believe that traffic congestion can be solved with more lanes. Sacasas explains that this is due to an inability to imagine differently: “What can an institution possibly offer you except more of itself? For example, the one remedy for the problems it has unleashed that Facebook cannot contemplate is suspending operations.” Facebook cannot comprehend a metaverse where it isn’t the one making connections on your behalf; Google’s goal is to think for you by autocompleting your every email, conversation, purchase.

While they begin as augmentations of ourselves, Illich finds that “the institutions of industrial society do just the opposite. As the power of machines increases, the role of persons more and more decreases to that of mere consumers...the hypothesis was that machines can replace slaves. The evidence shows that, used for this purpose, machines enslave men.”¹⁵

Tools for Conviviality

Illich argued that the language of scarcity was one cause for this pathological monopoly. He tried to dispel the mirage that scarcity was solely the result of insufficient (not enough institutional commodities) rather than the excess of manufactured demand. But let’s be real. Who could really challenge the issue of unlimited wants with a sense of enoughness? The financialization of the world has long become one of the metaphors we live by, exemplified by phenomena such as the Gamestop short squeeze in January 2021.¹⁶ Even our al-

15 “There are two ranges in the growth of tools: the range within which machines are used to extend human capability and the range in which they are used to contract, eliminate, or replace human functions.” - *Tools for Conviviality*

16 A hyperreal moment where the price of a failing retail game company shot up over 30x and the fallout of the hype and downfall surrounding the events.

ternative financial systems may not be free of the same problems and in fact, could be leaning into them. Blockchain is usually promoted as a financial instrument enabling decentralized control. But as noted recently by *Positive Sum Worlds*, "...if blockchains serve a 'public' today, it is primarily one of decentralized finance. Fundamentally, these token holders share only one common object of concern: price."

Should any of us have to think about life in financial terms so much? We minmax our time and space like resources for a side hustle. Desires become animated by our investments rather than by our curiosities. There was a time where all my conversations started to end with the thought, "that would make a good podcast." The crypto ingroup are known as "token holders," while the outgroup is "nocoinsers." In the crypto world, we are what we hold. HR abbreviates humans as resources to be measured, managed, discarded. Even if not explicit, this reductionism becomes the water we swim in, our cultural liturgies.¹⁷ Can we escape this language of scarcity, of value?

Follow count, subscribers, page rank, h-index. This reduction is done everywhere: taxi drivers are measured solely by their number of miles driven, students become their grades or even their attendance record. Even in the spiritual realm, faith becomes solely a belief, ritual disappears, the transcendence of a sermon may become a TED talk, covenant community becomes more like a Costco membership.¹⁸ Programmers aren't immune to this characterization either; they become lines of code on GitHub. The abstraction of the "standardized repo" hides how each repo is maintained (it's governance, scope, purpose), not least because each one looks the

17 James K.A. Smith's work on cultural liturgies has had a great impact on me, how what we participate in changes us, even without us knowing. <https://divinity.uchicago.edu/sightings/articles/james-ka-smiths-cultural-liturgies>

18 A tithe becomes payment as dues, the consumer mindset of what can you do for me. Maybe you've heard of church hopping? (with the other extreme being a cult)

same. Maybe they are even “open source, not open contribution.”¹⁹ A repo can be seen as its own city, with its own rules, customs, and language. Traveling to a new physical country comes with an understanding of how different cultures may greet, eat, work, and play differently. This sort of quantification and objectification comes up as this universal concept of value or utility. For Illich, *value* has taken over the place of what was known as the *good*. Value is what can increase indefinitely, has no end. And as we know “stocks only go up.” Why not move fast? More is better.

Rather than being the opposite of evil, Illich relies on language of virtue to describe how what was good had a proper place, a golden mean.²⁰ Confidence is to tread the middle ground between self-deprecation (too little) and vanity (too much). He felt that we had lost the language of the good, and thus the language of limits. So how can our tools balance what we can do for ourselves with what a professional service can do for us? To reiterate, Illich’s suggestion wasn’t to stop using technology entirely, but to voluntarily impose boundaries on our tools.²¹ Namely, “tools to work with rather than tools that ‘work’ for them.” Such convivial tools nurture each person’s ability to help themselves and their neighbor. Industrial tools end up “deskilling”²² us, we externalize to them our “native capacity for healing, consoling, moving, learning, dwelling, and burying the dead.”²³ This is why he made the case for the

19 “SQLite is open-source, meaning that you can make as many copies of it as you want and do whatever you want with those copies, without limitation. But SQLite is not open-contribution.” (<https://www.sqlite.org/copyright.html>)

20 Virtue ethics is usually contrasted with consequentialism and deontology, it describes the thought of Aristotle, eudaimonia, see *After Virtue* by Alastair McIntyre, (Notre Dame University Press, 2007).

21 He preferred the term tool over technology. Tech has a magical quality to it (any sufficiently advanced technology is indistinguishable from magic).

22 Via <https://theconvivialsociety.substack.com/p/ill-with-want>

23 “.. Each of these capacities meets a need. The means for the satisfaction of these

disestablishment of compulsory school (akin to the separation of church and state) rather than its abolition, which is how his argument is commonly misunderstood.

With industrial tools, we can't make use of the *use value* of our own bodies, even to the point that our self-perception changes completely. People used to narrate their lives to doctors who listened to their stories. They understood themselves through their own words and lived experience. Now both the system itself and those in it (patients and doctors) have less need to know anything beyond what is precisely measured by instrument, whether in childcare or palliative care. Patients come to believe that the main way to understand oneself is by an abstracted notion of themselves, as represented on their medical charts, or by their risk cohort.

The unlimited space of the digital has happily incorporated the same kind of alienation while simultaneously being connected to everyone. It masks our sense of the physical; even the nebulous language of the "cloud" gives the illusion that this cyberspace is disembodied when its very foundation is miles of cables, data centers, and servers.²⁴ We become creators and yet, by our revealed preferences, we feel as if our Googled keywords can know us better than ourselves. We grant algorithms the ability to choose for us, and increasingly our ability to think. Our innate thirst for knowledge loses out to an app. We become like tamagotchis that desire to be managed. Even our very existence is digitally mediated: losing your phone, getting shadowbanned, or being ghosted is essentially death.

There is a clear pull to automate away all our decision making, whether to a corporation or even to the computer.

needs are abundant so long as they depend primarily on what people can do for themselves, with only marginal dependence on commodities." - *Tools for Conviviality*

24 Sacasas expands on this notion in *The Materiality of Digital Culture* (<https://www.cardus.ca/comment/article/the-materiality-of-digital-culture>).

Maybe the myth of technological neutrality hasn't died.²⁵ This is pretty clear in some notions of "trustlessness" within crypto and the dreams of "code as law". We see ourselves as entirely subjective and thus as biased. We take every chance we have to remove ourselves, forgetting that it is precisely our personal commitments that motivate us to make art, create structures, practice science. We outsource ourselves to death.²⁶

T.S. Eliot said this:

They constantly try to escape
From the darkness outside and within
By dreaming of systems so perfect that no one will need
to be good.
But the man that is will shadow
The man that pretends to be.

We could easily replace "no one will need to be good" with "...need to choose." But it doesn't have to be that way. Vitalik Buterin argues that "the goal of crypto was never to remove the need for *all* trust." He suggests that using multi-sigs or social recovery wallets (which involve people) doesn't betray the goal of crypto, but "give people access to...building blocks that give people more *choice* in whom to trust."²⁷ In a similar vein, Decentralized Autonomous Organizations (DAOs) in crypto should refer to the freedom of each party to make decisions rather than a desire to make organizations operated with-

25 See Drew Austin's *Worn Out*, for a piece on tech's supposedly neutral attitude applied to the realm of fashion. (<https://reallifemag.com/worn-out>)

26 "Man's final conquest has proved to be the abolition of Man." In *The Abolition of Man*, by C. S. Lewis

27 "...and furthermore, allow people to build more constrained forms of trust: giving someone the power to do some things on your behalf without giving them the power to do everything." (<https://vitalik.ca/general/2021/01/11/recovery.html>)

out human control. This may, at least, suggest a view of living with technology rather than being dominated by it.

Living with technology means setting limits on the power of our tools, reducing our dependence on industrial commodities. Illich suggests that we need to rediscover what was *vernacular*, as non-economic ways of thinking and being. Typically referring to local languages and architecture, Illich remixes the term to refer to a domain that is homemade, and thus within bounds. Like a book dedication, it occurs when we create for particular people whom we know by name rather than the abstraction of a user story, cohort, or the world.²⁸ Grandma's homemade cooking doesn't need to be incorporated into the economy as one step on the road to becoming a professional chef. Maybe she cooks for no ulterior purpose, no views, no revenue. Grandma's cooking shares its spirit with the earlier hacker ethos, a spirit of leisure and play, engaged in for no reason at all, for its own sake, and on its own terms.

It is against this backdrop of the vernacular, that Illich asks us to look towards the commons which lies beyond the modern dichotomy of private and public space (and public goods). As he noted, "A commons is not a public space. A commons is a space which is established by custom. It cannot be regulated by law. The law would never be able to give sufficient details to regulate a commons."²⁹ To break this mold, he tells the forgotten past of a commons in our own personal space, namely our body. He makes the (kinda gross) point that before things like pesticide, our skin was regularly inhabited with animals. Bed bugs, lice, fleas. He writes that even our "inhabited hair, belonging at the same time to inside and outside,

28 The Wordle craze started off as Josh Wardle's way of making something fun for his partner. It's wild how many threads there were, bewildered that he didn't monetize it through ads or making it a service, assuming the only reason one should make something is to make money (though he did later sell it to NYT)

29 Hair and the History of the City: <https://danielaterrile.wordpress.com/2011/11/17/hair-and-the-history-of-the-city/>

makes the division more fuzzy.” It was a “shared” space, and we didn’t think much of it (there was nothing that could be done). Now we can’t help but think of our skin as this dividing line between ourselves and the outside world, it becomes that much harder to understand a shared commons. The door that separates our private homes from the street represents our buffered self.³⁰ But reminiscent of Jane Jacobs’ sidewalk life, Illich reminds us that we aren’t necessarily separated by rigid lines of public and private spaces.

Let us hope to recoup such a notion of commons. Let us hope to not see ourselves as sovereign individuals or homogeneous components in a global program, but as interdependent members within a body of many parts.³¹ That hope seems necessary to share the proverbial table with those around us, in an intimate space where our neighbor’s aura instead of their vibes assure us that we are heard. Maybe it’s around the table that even our communication will find its limits, in words and their silences.³²

30 See Charles Taylor’s notion of porous (pre-modern, accepting of spirits/God, connecting the inner and outer) selves vs. buffered (modern, preventing anything from affecting the self, including transcendence/meaning) selves in *A Secular Age*.

31 “For just as the body is one and has many members, and all the members of the body, though many, are one body, so it is with Christ;” “If one member suffers, all suffer together; if one member is honored, all rejoice together.” - 1 Cor 12:12-31 (NIV).

32 An attention economy doesn’t want our silence, can’t contain it.

Jet

*50 original drawings by Ernesto Bonato
made especially for Conspiratio 5. 26.5 x 33 cm. 2023*

The paintbrush is one of the oldest tools produced by human culture and has changed little over time in its structure and concept. Essentially, this structure boils down to a bundle of animal or vegetable bristles, tied to a handle (commonly made of wood, but occasionally made of bone) by a ring or bandage made of metal or other material (ferrule). The function of the bristles is, at the same time, to retain a certain amount of paint and transfer it to the surface, reacting to the form of gesture, speed and pressure that the artist imparts to the brush. In other words, its malleable structure and specific shape allow the lines or stains produced to constantly vary according to the artist's intention, which is communicated by varying pressure, speed and direction. In contrast to the bristles, the handle by which the artist holds the brush is rigid, allowing the intention and energy of the artist's body to be





conveyed to the tip of the brush with precision and without deviations. In this way, the brush becomes an extremely precise and sensitive extension of the hand, capable of enhancing and enriching its expressive possibilities and responding not only to the body structure, but also to the needs of the artist's spirit and sensitivity. Therefore, the brush has survived as the most versatile, complete and, at the same time, essential tool for creating images and texts throughout history. For this reason, I chose for the cover of this edition of *Conspiratio* dedicated to the work 'Tools for Conviviality', to make original drawings, using only a brush, black ink and white handmade paper.

Each copy of the publication features a different drawing made directly on Sekishu Washi paper with Japanese sumi ink (Japanese calligraphy ink), which was then manually pasted on each of the 50 covers. Each drawing was created with a Chinese brush (either flat or round), and with a single gesture from the artist. In this case, the gesture communicates the energy that originates from heaven and earth and that activates the center of the artist's body and that flows through the arm and hand that holds the brush onto the surface of the paper. The resulting movement conveys this very rush of energy from a state of mental emptiness. When holding one of the 50 copies of the publication in your hand, you can feel the texture of the paper, the opaque quality of the ink and even its smell, at the same time as you can connect to the energy and silence transmitted by the artist's unique gesture.

Ernesto Bonato, Spring 2023





Reviews

To be (Cyborg) or not

Review by Sajay Samuel

Chris Bateman, **The Virtuous Cyborg**, (London: Squint Books, 2018)

Jonathan Crary, **Scorched Earth: beyond the digital age to the post-capitalist world**, (New York: Verso Books, 2022).

Chris Bateman says Illich's *Tools for Conviviality* decisively shaped his thinking about the moral implications of tools. He sent me *The Virtuous Cyborg* to invite interested readers of *Conspiratio* to discuss his arguments. Bateman has made video games for more than twenty years and has deep knowledge of the aesthetics of digital play experiences. That is even more reason to take his argument seriously—particularly by those who have never played a video game or used a smartphone.

The Virtuous Cyborg comprises eight chapters and a sheaf of useful materials at the end which include a Coda/Overture, a Glossary, Author Notes, and References. The Author Notes explains why Bateman refers to the authors he knows by their first name and why he does not use academic style citations. The Glossary is necessary to keep track of the many technical terms Bateman has coined for his argument, which is also helpfully summarized in the Coda/Overture.

The Virtuous Cyborg is intended to explore the moral implications of tools in general, whether cars, hammers, or steam engines. However, it focuses on such digital phenomena as video games, smartphones, and social media. For the digital ignoramus, some of the examples used to elucidate his argument are not easy to understand. It took me a cou-

ple of conversations with a gamer to form a dim idea of why Bateman thought a 'Massively Multiplayer Online Role-Playing Game (MMORPG)' was a 'truly social game.'

Ordinarily, the words cyborg and robot conjure up humanoids in the cast of the *Terminator* or *R2D2* from the movies. Instead, these and more are technical terms in Bateman's argument. A cyborg is a 'human-robot pairing' of a living being and an inanimate 'robot.' A robot is any device that is 'capable of independent functioning' whether it be a jukebox or smartphone. Accordingly, the computer on which I am writing this book review is a digital robot and I am a cyborg insofar as I cannot be disentangled from the computer. Such computer-human interactions result from a mind-boggling set of interrelated materials (computer chips and shipping containers) and activities (coding software, ordering parts, designing packaging). A 'cyberg' (his word) refers to such 'vast and complex webs of connectivity' of which cyborgs are elements. In Bateman's opinion, the second largest 'megacyberg' is the Internet, which enfolds about half the world's population. The most pervasive cyberg is money, which captures all but two percent of the world's population within its networks.

Bateman thinks such technical terms are necessary lest the reader forget that 'we were always cyborgs,' no different from ants and beavers. This is the first premise of his argument. Accordingly, he denies any substantive distinction between the natural and the artificial or equivalently between the natural and the cultural. Our cyborg condition as an ineradicable fact implies that the suggestion 'we give up our smartphones...is not even worth making.' This allows Bateman to avoid peddling nostrums that sound good in principle but are impossible in practice. For instance, more than 85 percent of people all over the world use smartphones today. 'Part of the essential crisis we are facing' is that we cannot wish these robots away, however destructive they are of social relations

and personal integrity. *The Virtuous Cyborg* is the author's unflinching attempt to understand 'the moral implications of living with robots' that have become indispensable.

The second premise of *The Virtuous Cyborg* is that tools can 'affect how we think and act'; that they 'can encourage virtuous behavior or draw us into behaving badly.' To ignore their influence on human behavior is to avoid finding 'ways in which the design of our robot's hardware and software *could be made to encourage virtue and cybervirtue*' (emphasis in original). Just as humans can be virtuous or not, so also cyborgs can be cybervirtuous or not. The book is a plea to design robots that facilitate cybervirtue instead of increasing profits or promoting seeming conveniences that in fact debilitate.

Accordingly, Bateman elaborates nine cybervirtues and their contrary cyber-debilities (few of which rise to the level of cyber-vices). The trash bin which appears on every computer is an example of the programmed cybervirtue of kindness because it is designed to give the user time to reflect on whether she really wants to discard the file for good. The notification that alerts users to the quantity of screen time spent each week encourages the cybervirtue of restraint when using digital robots. The unguarded anonymity permitted by Facebook spurs the social cyber-debility of cyber-cruelty whereas a Multiuser Dungeon (MUD) supervised by a group of well-meaning wizards can nudge participants towards 'a virtuous community...bound together by their mutual engagement in the fictional world of a game.'

Among his nine cybervirtues appropriate for the design of robots, Bateman identifies cyber-fidelity as 'another name for what Ivan Illich called convivial tools.' That is because, like convivial tools, cyber-fidelity refers to robots that aid 'our commitment and our communities without simultaneously engendering our dependency.' To his credit, Bateman

however also confesses that he does not know ‘whether cyber-fidelity is even possible in a world of robots’ Yet, Bateman presses on because the alternative to the possibility of designing convivial robots is simple ‘technological addiction.’

Yet, acknowledging cyborgs as addicts may generate different insights. In his Author Notes and elsewhere, Bateman has occasion to refer to *Energy and Equity*. Illich’s critique of motorized transport was, like Bateman’s, rooted in the premise that tools shape the field of action and, in Illich’s case, also self-perception. Regardless of whether they are fueled by gasoline or the sun, cars and buses like trains and planes are designed to immobilize your feet. It follows that there is no way to make them convivial. However, what is feasible is to limit their use in a way that they are subordinated to activities that do enable you to use your feet —walking and cycling. Similar considerations may apply to thinking about a good life for cyborgs. It may be less a matter of designing digital robots that encourage cybervirtues than of discovering criteria and methods that limit their use.

In his *Scorched Earth*, Jonathan Crary also refers to Illich’s *Tools for Conviviality*. However, unlike Bateman who holds out the hope for virtue in the time of cyborgs, Crary does not think ‘the internet complex’ can be made convivial or that cyborgs can be virtuous. He makes this plain in the first line of his book: ‘if there is to be a livable and shared future on our planet, it will be a future offline.’ Instead, he invokes Illich’s later insight that the age of tools understood as instrumental means to achieving human ends might be over. He does not think digital robots and the internet are tools in this accepted sense. Instead, insofar as the internet has become the milieu of most human activity it is a ‘historically unprecedented reality,’ in which ‘any goals or ends we pursue cease to be ones we have truly chosen.’

Why can’t we give shape to our lives when the internet

is our milieu? Is not the internet today what the natural world was once —an enveloping circumstance that both constrains and enables the field of human possibilities? Crary's answer requires understanding what he means by the 'internet complex.' It lies at the core of his short, combative pamphlet that 'affirm[s] the truth of shared understandings...and insist[s] that forms of radical refusal, rather than adaptation and resignation, are not only possible but necessary.'

The internet is commonly understood to comprise all the digital devices that are connected by satellites overhead and cables underground and undersea. The internet spreads 'communication,' and, like Illich before him, Crary finds communication unseemly because it cannot distinguish between animal, human, and machine. It is not only people who communicate through computers and phones. The Internet of Bodies refers to communications about animal functions as when a smart watch sends your blood pressure data to a health-monitoring software. The Internet of Things refers to the communications about machines such as when your refrigeration updates your digital shopping list by the carton of milk you just consumed. Whatever the differences between programs, apps, or online services, they are similar in that they require you to be online. Cars are designed to lift you off your feet. The internet is designed to lift you out of your body.

The internet complex is formed when this necessarily out-of-body experience combines with capitalism. To a reader generally skeptical of 'isms,' Crary's frequent use of capitalism may suggest a catchall phrase rather than a descriptor. Yet a moment's reflection should disabuse that reader. Capitalism, says Crary, 'has always been a conjunction of an abstract system of value and the physical and human externalizations of that system.' When activities and things are captured by money, they are subjected to an algebraic calculus that abstracts them from their concreteness. Labor is an abstract category

that commensurates fishing and teaching. Tagging a tree or a kidney with a price makes them exchangeable. What does not have a price is not invaluable but valueless. In this sense, capitalism is more than a Jeff Bezos or the insurance industry. Capitalists and capitals are not new. But the throughgoing monetization of all things and activities is relatively recent. Today, no corner of the earth, sky, or water is safe from the calculator's clamor. No activity or thing is immune to being captured by the circuits of exchange value. Even imaginary things are routinely fabricated and exchanged through futures and options contracts on electronic trading platforms. Accordingly, the internet complex refers to the closed circuit between the internet and capitalism.

Crary therefore insists it is delusionary to believe that the internet can function independently of the 'world-destroying systems and operations of global capitalism.' The internet emerged from the bowels of the US war machine. Those who still hope for digital commons forget the servers on which their data reside are all either public or private property. Those who still believe that the internet could dissolve political, economic, and social hierarchies in the brew of peer-to-peer networks forget that profits and power are amassed in direct proportion to the ownership of accumulated data. That the internet exacerbates socio-economic polarization became obvious during the covid-19 pandemic. People were locked down all over the world for months on end. So called essential workers served the laptop class who remained ensconced in their ICU for the healthy. Those who still peddle the idea that the impoverished and the destitute can use the internet to right the injustices visited upon them are 'not just wrong but malevolently irresponsible.'

In three essays, Crary assembles proof of the material, social, and personal depredations that attend the internet complex—the twinned cuffs of capitalism and the internet

that shackle humans to screens. To summarize these incendiary essays would be to tame the anger that enlivens them, to narrow the learning that enriches them, and to dull the hope that uplifts them. In his explanation of why he chose the word *scorched* in his title, Crary notes its derivation from *escorcher*, which in old French, ‘means to flay or to strip the skin of a body, rendering it fatally exposed.’ He documents not only the mining and deforestation of the earth but also the shameless laying bare of the human body. In his third essay, Crary masterfully presents the accelerating homogenization of experience that results from the steady anesthetization of the senses. In particular, he focuses on how the human voice, gaze, and face have been captured and made into objects for management through biometrics, speech, and facial recognition technologies. His reflections on the dispossession by machines and money of the fibers that humanize the human animal are searing. They are reminiscent of Illich’s courses in the mid to late 1990s at Penn State and Bremen University. In some of those lectures, many of which have been published in languages other than English, Illich not only relied on Crary’s *Techniques of the Observer* but also explored a similar path into the history and phenomenology of the face, sight, and voice.

Despite their difference in orientation—Crary holds out the possibility of getting offline that Bateman denies—these two authors agree that the cultures of the ‘Global South’ offer a singular source to rediscover ways to reduce the harmful effects of the internet complex. Both recognize that traditional cultures have ways of knowing and being that could be models of how to be less dependent on technology and the economy. That may well be true. But it is also true that decades of colonization, development, and globalization have almost destroyed those traditions and that what remains of them may function as nostalgic kitsch for virtue signaling cosmopolitans.

Perhaps the deeper vein to plumb is to be found right here, in our own despoiled backyard. Illich recoinced the word 'vernacular' in the early 1980s to denote all manner of non-market, autonomous actions through which people satisfy felt needs. He argued that the war against the vernacular has been 500 years in the making, starting with the invention of a taught and trained mother tongue. Today, despite being enmeshed in the internet complex, millions of people are nevertheless inventing ways to get offline, to work less, to grow food in urban gardens, and to raise chickens in suburban backyards. The vernacular is always already present at hand because rooted in the enfleshed body. All it takes to unplug is—no easy task— to come to our senses.

The Eclipse of Tools

Review by Diego Ferraris*

Jean Robert, The age of systems in Illich's later thinking

*Of all the things which wisdom provides to
make us entirely happy,
much the greatest is the possession of friendship.*
Epicurus

1.

The age of systems in Illich's later thinking, (*L'età dei sistemi nel pensiero dell'ultimo Illich*, Hermatena, Bologna, Italy 2019)¹ is the first work in Italian that explicitly addresses the richness and the range of investigations Ivan Illich conducted during the last twenty years of his life.² Jean Robert argues that though the press runs and circulation of the later Illich texts were far less than of those during his 'pamphleteering' years, Illich was, in fact, more prolific during his later

* Translated by Sara Tommasina

1 Jean Robert wrote the book in French around 2016 but could not find a French publisher. Thanks to his friend Aldo Zanchetta and the attentive and careful translations of Maria Adele Cozzi, Robert felt the Italian edition was the definitive version of his book. Robert was also able to collaborate with his beloved friend and colleague Javier Sicilia for a Spanish edition which was published in 2022 by Itaca Press under the title, *La edad de los sistemas en el pensamiento del Illich tardío*. For this review, I avoid directly quoting Robert too much or referencing page number but paraphrase his text because Conspiratio readers are unlikely to have access to the Italian edition. I am told there is an English edition under consideration for publication soon.

2 The fact that this long tract of investigations by Ivan Illich has been scarcely recognized so far raises the question of the reception, diffusion, and "readability" of his later works.

Diego Ferraris, die.ferraris@gmail.com
Ferraris, D. The Eclipse of Tools.
Conspiratio, Fall 2023, p. 254-263.

years.³ Robert should know: he wrote from a privileged position of being close friend and interlocutor of Illich during these years.

Robert's book is a testimonial of an intellectual friend from a situated standpoint and written in dialogue with Illich. His considerations and interpretations of Illich's work has two connected aspects. The first draws on his own memories and knowledge to give us an unprecedented biographical glimpse of Ivan Illich, while the second narrates the intellectual work Illich engaged in his later years. For example, Robert is able to speak authoritatively not only about the extraordinary experiences at CIDOC (*Centro Intercultural de Documentación*),⁴ between the 1960s and 1970s in Cuernavaca, México, but also about the living room conversation Illich anchored in Bremen, Germany, and State College, United States. Equally, Robert presents in simple and direct prose the many theoretical questions Illich explored and sought to put into public discussion during those years. In his fluid prose, Robert invites the reader to deeply understand and critically engage with Illich's concerns, hypotheses, and studies.

3 In 2005, a group of friends supervised by Barbara Duden, published a bibliography of the 'complete' work by Illich. The bibliography opens with his 1951 doctoral thesis in German: *Die philosophischen Grundlagen der Geschichtsschreibung bei Arnold Joseph Toynbee* (The philosophical fundaments of historiography in Arnold Joseph Toynbee). The works written between the 1971 and the 1976 (works which Illich called 'my pamphlets') take up the first four pages of the bibliography. The works published after 1976 occupy page 5 through page 26. Quantitatively, the work of this second group is five times the first. But there is another quantitative difference: many of his books of the 1970s had print runs in the hundreds of thousands, whereas the subsequent works did not exceed a few thousand. Most of the published articles of the later years appear in little magazines or were unpublished papers (mainly collated by Silja Samerski, then of the University of Bremen).

4 "Pilgrimage destination for many intellectuals from all the world"; "a secular place where to think"; "an institute of free and advanced studies" are some of the descriptors Robert uses for CIDOC. "CIDOC was a free university, without exams or diplomas, where the concepts and the thoughts of the industrial society of the '70 years was confronted and everyone was allowed to be student and occasionally a theater" (Robert, 2019: 15).

Robert's book is also the last instance and exemplar of his own considerable literary productions. His own work was consistently devoted to a wide-ranging and fundamental critique of hyper industrial capitalistic society, one that was forged alongside, but distinct from, that of Ivan Illich.⁵ Jean Robert wrote this book moved by a similar deep worry concerning the present. Grounded in what, thanks to María Zambrano, we can name his "visceral reason", Robert has written a book about Illich but also one that is about what they shared—the feeling of perplexed worry in having to confront the complexity of living in a hyper technological world, a sexist and, increasingly, "disincarnate" world. In this sense, Robert's book is written by a co-conspirator of Illich,⁶ a friend whose reflections are also aimed at animating the efforts of a far-flung group of persons interested in and inspired by Illich's thought.⁷ Like Illich, Jean Robert was also convinced that friendship outside the confines of the university or schoolroom was the ground from which truth might bloom in fullness.

2.

Of course, a book review is not an extended commentary on a book. It can only spark the reader's curiosity and interest in reading the text. Robert's book comprises seven chap-

5 Among the many publications of Jean Robert in French, German, Spanish, English and Italian, I recall here *La trahison del opulence*, with the collaboration of Jean-Pierre Dupuy, (Paris, Presses universitaires de France, 1976); *Le temps qu'on nous vole. Contre la société chronophage*, (Paris, Seuil, 1980); and with Majid Rahnema, *La puissance des paupers*, (Actes Sud, 2008).

6 I use here the term "conspirator" to invoke Illich's use of *Conspiratio* which was the kiss by which the first Christians commingled their spirits and sealed their mutual communion.

7 It is a network of persons across Mexico, Italy, France, Germany, India and Japan, who, inspired by their personal encounter with Illich or his texts, are realizing through seminars, meetings, and publications, a critical renewal of his ideas.

ters, a rich introduction, and an intensely meditative epilogue. Robert says that his introduction is “like a map, a compass, a kind of instruction manual” to the contents of the book. He proposes that the range of Illich’s investigations should be understood as composed of two distinct projects. The first comprised a critique of the “counterproductivity” of service institutions of the industrial age—education, medicine, transportation—mainly conducted under the aegis of CIDOC. The second project was elaborated from the 1980s onwards, partly with Barbara Duden, to explore the historicity of bodily perceptions and to examine the foundational axioms of the Western mind. Conducting in the “mirror of the past”, to quote Illich, this was an attempt to historicize “the certainties that ground the topology of the modern mind”. In this sense, his later work is a kind of “philosophical archeology.”⁸

Two new intuitions inspired these later investigations, says Robert. First, at the end of writing *Medical Nemesis*, Illich began to see that the experience of the physical body is determined by the social body, which is to say, that bodily experience is the result of the entanglement of the conceptual and the perceptible. The second intuition Illich attempt to flesh out during these years was the hypothesis that the age of the instrument or tools had a beginning because, Illich felt, it was coming to an end.

Robert invites us to take these intuitions seriously. He strenuously argues that the society in which we are living since the 1980s is in the middle of one of the biggest transformations of Western culture. Robert insists that we are in the midst of an “epistemological collapse” whose character may

8 “Philosophical archeology” is an open field of the contemporary investigation. Exponents of this style of thought include Immanuel Kant, Michael Foucault, Enzo Melandri, Paul Ricoeur, and Giorgio Agamben. Philosophical archeology is a form of questioning the present to show its “emerging moments”. Illich, used the metaphor of a crab walking backward into the past with its eyes fixed on the present to describe his style of philosophical archeology.

be described as the end of the age of the tool. Robert recounts Illich's suggestion that the very idea of an instrument or tool or technology is the result of theological reflections on the nature of the sacraments in the 12th century. Illich argued that tools are "distal"—separate and distinct from the user—and subordinate to the personal intentions of the user. Robert argues that Illich's investigations into the historicity of the tool or instrument was prompted by his discovery, with Duden, of changes to body perception in the late 20th century. Just as the integrity of bodily experience was transmogrifying into a systemic understanding of self, so also the perceptual category of the instrument was mutating into that of a system. Robert's quotes Duden to underscore this connection:

Before 1980, medicine was promoting a picture of a body which was in constant need of treatments. After this period, the picture transformed itself into one of a "human being" able to auto regulate himself as part of a complex cybernetic program" (...) Medicine, which induced its patients to see themselves as iatrogenic constructions, now asks them to make decisions which transform them into subsystems of the biomedical system.

3.

Robert's book can be read as if it is a sonata made of seven variations on the two theses he explores. The heart of the book is in the chapter 4, *Systems...in the heads*, where Robert reconstructs Illich's analysis of the history of the "tool". "The Greek word *organon* designated the tool", writes Robert, but "the hammer was an *organon* and so was the hand which held it." For the Greeks, the artifact was an "organic tool", and each was appropriate to particular or specific hands—the ax fit the farmer's hand as the sword fit the hand of a free born man

(*kaloskagathos*). However, in the 12th century, a new notion of the “instrument” arose in the context of scholastic debates on the nature of the sacraments. The sacraments were thought instruments, in the sense of separate and distinct from the hands that administered them. This conceptual separation of the hand from the tool is what defines the tool as an *instrumentum separatum*. It is the concept of the instrument that makes possible, for example, armies of farmers brandishing swords and knives.

The three chapters that precede this central argument not only lead up to it but can also be read as a self-contained intellectual biography of the early life of Ivan Illich. These chapters allow the reader to approach the central theme of the book by understanding the context of its origin and its importance within the overall arc of Illich’s work. The first chapter exposes the hypothesis that Illich is an unrecognized but yet great historian of technology *per se* and offers a synopsis of Illich’s biography from the 1950s and 1960s. Notably, Robert argues that the groundwork of Illich’s later contributions to the questions of institutional counterproductivity and Development lies in his immersion in Latin American culture during this period.

According to Illich, the history of the modern world is inseparable from the idea of scarcity: which is the story of the war of the State and the market against the subsistence of the people. The economy generates shortage whenever the autonomous ability of people is replaced by the sale and purchase of commodities which are, by definition, scarce. The spread of the economy entails replacing the vernacular abilities that are deeply rooted in the culture by the dependence on industrial goods and services. Robert devotes the second chapter to Illich’s time as a famous pamphleteer during the 1970s. Illich became world renown for defending the necessity of political

limits to the growth of institutional goods and services,⁹ and for his work in CIDOC¹⁰ to dissuade Church volunteers from spreading the cult of consumerism to Latin America. Despite the passage of time, Illich's critique of industrial society has not lost any of its power or validity.

In his third chapter titled *Pilgrims and new visions*, Robert discusses Illich's work during the 1980s and early 1990s inspired by Karl Polanyi's critique of modernity as a disembedding of the economy from its cultural and social matrix. It was also during this period that Illich came to appreciate the power of historical excavations to bring to light all that was lost by developing a world-wide economic market. The roots of his critique of the contemporary ecological catastrophe lie in this deeper engagement with Westernization as seen through the eyes of Polanyi, says Robert.

As I have already indicated, it is with the fourth chapter that Robert goes to the heart of the questions that orient his book. The incorporation of the user into the tool describes not only the system as a socio-technical artifact but also a fundamentally different perception of the body. Unlike an axe or a pencil which is separate and distinct from any body that might use it, a computer system is one that no body can put down because it is linked to a vast interconnected web. Moreover, interaction with such systems like the iPhone and Tik

9 Illich was taken as a militant intellectual in the 1970s and his radical critique of industrial society and of Development in the so-called Third World was widely publicized in pamphlets like *Deschooling Society*, *Medical Nemesis*, *Energy and Equity*, and *Shadow Work*, among others.

10 "In 1961, Illich founded the *Centro de Formación Cultural* (CIF-Center of Cultural Formation), in Cuernavaca, Mexico, officially organized to prepare missionaries and laypersons for volunteer work in Latin America. (...) Illich never tired of telling his pupils, over and over again, that in the countries where they were to eventually carry out their missionary duties, they would not be met with a pastoral vacuum to be filled: on the contrary, they would find expressions of faith which, though perhaps often disconcerting for them, were nonetheless very deep. Their pastoral approach was consequently to be "vernacular" and respectful of those very expressions; whenever faced with things they could not comprehend they were to hold their peace.

Tok also mold self-perception and require people to function as subsystems. A good example of the transformation of the instrument to the system is the idea of an immune system. When people think of themselves in terms of a medical immune system, their body and flesh become a subsystem of the bio-medical world system, says Robert.

4.

Over the last three chapters Jean Robert shows his fluency at synthesizing complex ideas in a clear and simple way. In a few pages he presents a synopsis of Illich's analyses of three major questions: the passage from vernacular gender to economic sex; the historicity of the bodily perceptions; and the history of the alphabet and writing. In each of these chapters, Robert shows how Illich described the modern age as a break from the past, which then allows the reader to become distant from her own taken-for-granted assumptions. According to Illich, sex understood as the genital differences between fundamentally identical human beings has replaced gender understood as the principle of distinction between beings called men and women. Sex is a necessary aspect of industrial society built on unisex assumptions. When men and women are considered the same and put into economic competition with each other, then one side loses by being confined to the realm of unpaid housework. The ideology of equality together with the idea of endless economic progress undermines the specific domain of the female gender and keeps women in a subordinate economic position.¹¹

The last two chapters are broadly concerned with

11 The clarity and incisiveness of Jean Robert's thought in these pages is not merely due to his intimate knowledge of Illich's thought. They also owe much to Robert's deep and continuous conversation he had with his life partner—clinical psychologist, anthropologist, and committed intellectual—Sylvia Marcos. She was also the one who led the discussion among decolonized feminists on *Gender* which was published as *Mirandas feministas a la obra de Jean Robert* (2020).

historical mutations in body and self-perception in Western culture. Illich's work with Barbara Duden inspired him to investigate the transformations in the understanding of the gaze across the centuries. That the eye is now understood as a tool for seeing is intimately related to techniques of visualization. Today we are surrounded by visual objects we are shown but cannot see—whether planet earth, the fetus, or coronavirus. The suffocation of the felt and lived body by graphic and textual visualization of the medicalized body removes us from our experience.¹²

In the last chapter, Robert sketches the *Cultural history of the alphabet* as presented by Illich who wrote about eight texts on the theme, of which only two were widely published books.¹³ This chapter is a true invitation to face up to the challenges of the present, to invent an ethic of the gaze suitable for the digital age in accord with the “ethic of the reading” that emerged in the age of the book. Robert eruditely reconstructs and exposes Illich's thesis about the origin of the alphabet and about the different historical stages of the transformation from the murmuring sea of orality to the bookish culture of the text. With Illich, Robert argues that the text is fundamental to the mold which has formed European culture and has sparked the Westernization of the world.

5.

Robert invites us to the critical historical standpoint of Ivan Illich, a stance which I, along with Fabio Milana and Giorgio Agamben, understand as “archeological”: an exploratory thought which questions the present by putting into

12 As Robert writes, images of the body constructed by the medicine silences the self-perceived body. It is to distinguish the described body from the felt body that Illich and Duden contrast the Greek *soma* against the Latin *corpus*.

13 I refer to *ABC: the alphabetization of the mind* with Barry Sanders; and *In the Vineyard of the Text*. The remaining are essay length writings on the topic including the little known *Die Schule ins Museum. Phaidros ind die Folgen* (1984).

discussion the presumed universality of categories and ways of being. Thanks to his insiders' reconstruction of the second phase of Illich's intellectual efforts, Robert clarifies that Illich first exposed the counter-productivities of institutional modernity by focusing on "what tools do", and later focused on "what the tools say." It is this latter focus that allowed Illich to intuit and formulate the 'age of tools' as having a beginning and now coming to an end.

In a world in which tools or instruments that were once understood as distinct and separate from the user and the human body are now integrated into them to constitute systems (without an outside), it is difficult to distinguish between what technologies do and what they say. The system announces its imperatives without differentiating between the real and the symbolic. When integrated into systems, people are shaped in both action and self-perception which implies they cannot avoid being used by the system.

However, Robert also emphasizes the reflections of Ivan Illich and his collaborators on how a counterattack may be practical against the ongoing social cybernetic takeover of personal autonomy and modes of self-defined existence. Robert invites us to reflect on the historical advent of this new period which, in his opinion, can be refused by the act of saying NO. The radical NO to being treated as and feeling as a subsystem requires building alternative collectives—concrete, autonomous, and anti-capitalistic—such as the communities organized by *Ejercito Zapatista de Liberacion Nacional* in Chiapas, Mexico. Saying NO starts from yourself, from one's own interior silence and close relationships; saying NO means to think concretely and without nostalgia about what it means to bid "farewell to tools." Robert believes the task of our time is to think and elaborate a suitable social ethic in a world without tools because it is only by living with and for each other that we become human.

Translations

Un colpo d'occhio disciplinato sugli arnesi IT

Attilio del Vinco

Talvolta ci passano per le mani oggetti desueti perché ormai fuori dalla vita quotidiana. Li si continua a tenere per il carico di un vissuto che, seppur andato, è sentito come vicino. Continuano a dirci da dove veniamo e ci rimandano ad altre vite premessa indispensabili alla nostra. Sono icone, per questo maneggiarli è un riportare alla luce chi li maneggiava e partecipare con loro della realtà.

Gatt'Bigio da Mugnano, quando portava il vinco per legare le viti, raccontava la storia di Attilio e d'le su vincaie. Ormai vecchio, in procinto del trapasso, Attilio le lasciò ai suoi come estrema volontà. Per una vita erano state la fonte di quella materia versatile attraverso cui le sue giuste mani avevano potuto: legare quello che si doveva e intrecciare quello che serviva in modo da compire tutto ciò che, per campare, toccava fare. “Quando n'n c'sarò più, tenetele a posto per qualche altro anno”, con queste parole Attilio fa il suo per continuare una storia millenaria. Il seme è posto nel cuore dei suoi: il continuare delle vincaie formerà i loro gesti e i gesti saranno memoria di lui e passo proporzionato dell'esistenza dei suoi.

La creazione e l'utilizzo di arnesi per le attività necessarie era qualcosa proprio di un posto tanto che, la loro storia, è premessa indispensabile per capire come quel particolare posto è stato abitato nel tempo. Le tracce lasciate, siano segni sulla materia o gesti ritualizzati, ci interrogano sul presente nel quale una sorta di esproprio del sapere e saper fare si compie in ossequio di canoni di efficienza che rendono sterile

A disciplined glance at tools

EN

by Attilio del Vinco

Translation from Italian by Neto Leão

Sometimes, objects fallen out of daily use come into our hands. We hold on to them weighed by the experience of them—both past and yet close at hand. Their silent solidity speaks to us of the lives we once lived and the indispensable premise for our lives today. These objects are icons. Hence, to handle them now is to bring into the light those who have used them and to participate in their reality.

Gatt'Bigio from Mugnano told the story of Attilio and his willow grove. From the atrium of death, Attilio bequeathed the willow grove to his kin. “When I’m no longer here, keep them in place for a few more years”, said Attilio who had done his part to continue a millennial history. The grove was the source of a versatile material from which Attilio shaped his life. In his competent hands, the willow bound what needed to be bound; wove what needed to be stitched; helped produce all that was needed to make a living. His bequest placed a seed in the heart of his kin. Their care for the willow grove will shape their gestures which not only memorialize him but make them walk in his footsteps.

The fabrication and use of tools for the activities necessary to living is specific to a place. The history of its tools is integral to understanding how a particular place has been inhabited. The present expropriates knowledge and know-how and desiccates them of their living sap by the logic of efficiency that sterilizes what once nourishes. The traces tools leave behind, whether as scars on matter or in ritualized gestures,

ciò che prima nutriva.

A partire del vinco si ottenevano una serie innumerevoli di contenitori che da noi vanno dal crino al bacajio passando per una gradazione canestri. Un canestrino per le uova, un canestro robusto per la vendemmia o per le olive erano di vinco con la scorza. Il cesto per la biancheria era di fattura fine: il vinco pelato e il bordo ricercato. La canestra per la colazione al tempo della battitura doveva essere di fattura ugualmente ricercata, l'importanza del momento la imponeva.

Oltre i contenitori un'altra classe di arnesi fondamentali era costituita dai vagli. La necessità di separare ciò che è buono da ciò che va scartato ricorreva. Il crevello per le olive dalle foglie, la giujiaia per il grano dalla pulla, svariati setelli, la maggioranza tondi, per i semi dalle impurità. Il buono era per il nutrimento o per la semina dell'anno venturo. Lo scarto, sovente spulciato per recuperare qualcosa, finiva in pasto alle bestie o veniva sparso sui campi. Scernire era l'azione che si compiva cui corrispondeva anche uno scernire la luna che consentiva di cogliere il farsi propizio del tempo per la semina.

Al fuoco spetta un posto a parte, racchiuso in un ventre è mezzo che consente di modellare trasformare la materia. Dal suo addomesticamento viene il forno per cuocere il pane la forgia per rendere malleabile il ferro e in ultimo il focolare, dove il rigore del freddo si attenua ed il racconto si dipana.

Questa Roba, che l'esperienza del quotidiano odierno percepisce come obsoleta, apre uno spazio dove i miracolosi palliati dell'ipermodernità alla condizione umana possono essere giudicati per quello che sono e fanno. Tra accettarli o subirli, senza troppe celebrazioni, c'è sempre la possibilità di schivarne qualcuno; nella consapevolezza che ad una rinuncia non corrisponde una perdita.

puts this present into question.

From the willow, an innumerable series of containers were obtained, from *crino* to *bacajio* and a range of basket types. A small basket for the eggs, a sturdy basket for the grape harvest or for the olives were made from the unpeeled willow. The linen basket required fine workmanship using peeled willow and smooth edges. The breakfast basket used at the time of the beating of the grain had to be of equally refined workmanship, appropriate to the importance of the action.

In addition to the containers, another class of fundamental tools were the sieves (*setelli*) which separate what is good from what is to be discarded. The *crevello* separated the olives from the leaves, the *giuiaia* separated the grain from the chaff, and various other *setelli*, the majority of which were round and separated the seeds from impurities. What was good was meant for the table or for next year's sowing. What was discarded, often sifted again to recover any useful remnants, was not waste but given to the animals or scattered over the fields. Sieving was an act of discernment (*scernire*) akin to discerning the phases of the moon that were propitious for sowing.

Fire deserves its own and different place. Enclosed in a womb, it allows you to shape and transform matter. Domesticated in an oven, fire bakes bread, in the forge, fire it bends iron, and finally in the hearth, fire dispels the harshness of winter and allows our stories to be shared.

This Stuff, which today's everyday experience perceives as obsolete, opens up a space where the miraculous palliatives of hypermodernity to the human condition can be judged for what they are and what they do. Between unenthusiastically accepting them or enduring them, there is always the possibility of avoiding some of these palliatives, with the awareness that such renunciation does not correspond to a loss.

















p. 270 | **Attilio del Vinco**
Bacajio, photography, 2017
39 x 26cm

p. 273 | **Attilio del Vinco**
Crino, photography, 2017
33,9 x 22,6 cm

p. 274 | **Neto Leão**
Giujajia, photography, 2022
34 x 22,6 cm

p. 276 | **Neto Leão**
Crevello, photography, 2022
33,9 x 22,6 cm

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